DOCUMENT RESUME

ED 399 794 FL 024 120

AUTHOR	Hume, Elizabeth, Ed.; And Others
TITLE	Studies in Synchronic and Diachronic Variation. Working Papers in Linguistics No. 46.
INSTITUTION	Ohio State Univ., Columbus. Dept. of Linguistics.
PUB DATE	95
NOTE	125p.
PUB TYPE	Collected Works - Serials (022)
JOURNAL CIT	Working Papers in Linguistics; n46 Spr 1995
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Contrastive Linguistics; Creoles; Diachronic Linguistics; English; Foreign Countries; Gbaya; Grammar; *Language Patterns; Language Research; *Language Variation; Linguistic Theory; Middle English; Morphology (Languages); Old English; *Phonology; Sentence Structure; Tone Languages; Ukrainian; *Uncommonly Taught Languages; Verbs
IDENTIFIERS	Belize

ABSTRACT

Papers in comparative and historical linguistics are presented. "The Independent Development of Mid Tone in Suma" (Mary Bradshaw) extends earlier research on tone change in Gbaya languages to Suma, a Gbaya language previously not included. "Diachronic Morphology: An Overview" (Brian Joseph) reviews diachronic morphological theory, focusing on what is mutable and what is stable in morphology, where morphology comes from, what triggers morphological change, and whether or not a general theory of morphological change is possible. "Divergence of Syntactic Frames and Diachronic Change" (Hyeree Kim) examines syntactic frames governed by the so-called impersonal verb in Old English and Middle English. "The Emergence of Creole Copulas: Evidence from Belize Creole" (Bettina Migge) offers evidence in support of a theory of the emergence and development of two Caribbean English Creole copulas using natural synchronic data from Belize Creole. "The Diachronic Fragmentation of Modal 'by' in Ukrainian" (Halyna Sydorenko) identifies five distinct manifestations of the modal in modern Ukranian, and also points to overlap in form and function, suggesting that the manifestations represent a morphological constellation. Articles contain references. (MSE)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED 399 794

Working Papers in Linguistics

No. 46

STUDIES IN SYNCHRONIC AND DIACHRONIC VARIATION

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL IN OTHER THAN PAPER COPY HAS BEEN GRANTED BY

Brian D
Joseph

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

Edited by
Elizabeth Hume
Robert Levine
Halyna Sydorenko

Spring 1995

THE OHIO STATE UNIVERSITY

FL024120

The Ohio State University
DEPARTMENT OF LINGUISTICS

BEST COPY AVAILABLE

The Ohio State University

Working Papers in Linguistics No. 46

Studies in Synchronic and Diachronic Variation

Edited by

Elizabeth Hume
Robert Levine
Halyna Sydorenko

The Ohio State University
Department of Linguistics

222 Oxley Hall
1712 Neil Avenue
Columbus, Ohio 43210-1298 USA
lingadm@ling.ohio-state.edu

Spring 1995

All Rights Reserved
Copyright © 1995 by The Ohio State University

Information Concerning the OSUWPL

The Working Papers in Linguistics is an occasional publication of the Department of Linguistics of the Ohio State University and usually contains articles written by students and faculty of the department. There are generally two to three issues per year. Information about available issues appears below. Numbers 1, 5, 10 and 23 are out of print and no longer available. The table of contents can also be viewed on our WWW (World Wide Web) server:

http://ling.ohio-state.edu/Department/Osuwpl.html

There are two ways to subscribe to WPL. The first is on a regular basis: the subscriber is automatically sent and billed for each issue as it appears. The second is on an issue-by-issue basis: the subscriber is notified in advance of the contents of each issue, and returns an order blank if that particular issue is desired.

Volume

18 $5.00. 183 pp. (June 1975). Papers by Michael Geis, Sheila Geoghegan, Jeanette Gundel, G.K. Pullum, and Arnold Zwicky.

19 $5.00. 214 pp. (September 1975), edited by Robert K. Herbert. *Patterns of Language, Culture and Society: Sub-Saharan Africa* contains eighteen papers presented at the Symposium on African Language, Culture, and Society, held at The Ohio State University on April 11, 1975.

20 $5.00. 298 pp. (September 1975), edited by Robert K. Herbert. *Proceedings of the Sixth Conference on African Linguistics* contains twenty-seven papers presented at the Sixth Conference on African Linguistics, held at The Ohio State University on April 12-13, 1975.

21 $5.00. 252 pp. (May 1976), edited by Arnold M. Zwicky. *Papers on Nonphonology*. Papers by Steven Boer and William Lycan, Marian Johnson, Robert Kantor, Patricia Lee, and Jay Pollack.

22 $5.00. 151 pp. (February 1977), edited by Olga Garnica. *Papers in Psycholinguistics and Sociolinguistics*. Papers by Sara Garnes, Olga Garnica, Mary Louise Edwards, Roy Major, and John Perkins.

24 $5.00. 173 pp. (March 1980), edited by Arnold M. Zwicky. *Clitics and Ellipsis*. Papers by Robert Jeffers, Nancy Levin (OSU Ph.D. Dissertation), and Arnold Zwicky.

25 $5.00. 173 pp. (January 1981), edited by Arnold M. Zwicky. *Papers in Phonology*. Papers by Donald Churma, Roderick Goman (OSU Ph.D. Dissertation), and Lawrence Schourup.

26 $5.00. 133 pp. (May 1982), edited by Brian D. Joseph. *Grammatical Relations and Relational Grammar*. Papers by David Dowty, Catherine Jolley, Brian Joseph, John Nerbonne, and Amy Zaharlick.

27 $5.00. 164 pp. (May 1983), edited by Gregory T. Stump: *Papers in Historical Linguistics*. Papers by Donald Churma, G.M. Green, Leena Hazelkorn, Gregory Stump, and Rex Wallace.

28 $5.00. 119 pp. (May 1983), Lawrence Clifford Schourup, *Common Discourse Particles in English Conversation*, OSU Ph.D. Dissertation.

29 $5.00. 207 pp. (May 1984), edited by Arnold Zwicky and Rex Wallace: *Papers on Morphology*. Papers by Belinda Brodie, Donald Churma, Erhard Hinricks, Brian Joseph, Joel Nevis, Anne Steward, Rex Wallace, and Arnold Zwicky.

30 $5.00. 203 pp. (July 1984). John A. Nerbonne, *German Temporal Semantics: Three Dimensional Tense Logic and a GPSG Fragment*, OSU Ph.D. Dissertation.

31 $6.00. 194 pp. (July 1985), edited by Michael Geis: *Studies in Generalized Phrase Structure Grammar*. Papers by Belinda Brodie, Annette Bissantz, Erhard Hinricks, Michael Geis and Arnold Zwicky.

32 $6.00. 162 pp. (July 1986). *Interfaces*. 14 articles by Arnold M. Zwicky concerning the interfaces between various components of grammar.

33 $6.00. 159 pp. (August 1986). Joel A. Nevis, *Finnish Particle Clitics and General Clitic Theory*, OSU Ph.D. Dissertation.

34 $6.00. 164 pp. (December 1986), edited by Brian Joseph: *Studies on Language Change*. Papers by Riita Blum, Mary Clark, Richard Janda, Keith Johnson, Christopher Kupec, Brian Joseph, Gina Lee, Ann Miller, Joel Nevis, and Debra Stollenwerk.

35 $10.00. 214 pp. (May 1987), edited by Brian Joseph and Arnold M. Zwicky: *A Festschrift for Ilse Lehiste*. Papers by colleagues of Ilse Lehiste at The Ohio State University.

36 $10.00. 140 pp. (September 1987), edited by Mary Beckman and Gina Lee: *Papers from the Linguistics Laboratory 1985-1987*. Papers by Keith Johnson, Shiro Kori, Christiane Laeufer, Gina Lee, Ann Miller, and Riita Valimaa-Blum.

37 $10.00. 114 pp. (August 1989), edited by Joyce Powers, Uma Subramanian, and Arnold M. Zwicky: *Papers in Morphology and Syntax*. Papers by David Dowty, Bradley Getz, In-hee Jo, Brian Joseph, Yongkyoon No, Joyce Powers, and Arnold Zwicky.

38 $10.00. 140 pp. (July 1990), edited by Gina Lee and Wayne Cowart: *Papers from the Linguistics Laboratory*. Papers by James Beale, Wayne Cowart, Kenneth deJong, Lutfi Hussein, Sun-Ah Jun, Sook-hyang Lee, Brian McAdams, and Barbara Scholz.

39 $15.00. 366 pp. (December 1990), edited by Brian D. Joseph and Arnold M. Zwicky: *When Verbs Collide: Papers from the 1990 Ohio State Mini-Conference on Serial Verbs* contains eighteen papers presented at the conference held at The Ohio State University, May 26-27, 1990.

40 $15.00. 440 pp. (July 1992), edited by Chris Barker and David Dowty: *Proceedings of the Second Conference on Semantics and Linguistic Theory* contains twenty papers from the conference held at The Ohio State University, May 1-3, 1992.

41 $12.00. 148 pp. (November 1992), edited by Elizabeth Hume: *Papers in Phonology*. Papers by Benjamin Ao, Elizabeth Hume, Nasiombe Mutonyi, David Odden, Frederick Parkinson, and Ruth Roberts.

42 $15.00. 237 pp. (September 1993), edited by Andreas Kathol and Carl Pollard: *Papers in Syntax*. Papers by Christie Block, Mike Calcagno, Chan Chung, Qian Gao, Andreas Kathol, Ki-Suk Lee, Eun Jung Yoo, Jae-Hak Yoon, and a bibliography of published works in and on Head-Driven Phrase Structure Grammar.

43 $12.00. 130 pp. (January 1994), edited by Sook-hyang Lee and Sun-Ah Jun: *Papers from the Linguistics Laboratory*. Papers by Benjamin Ao, Islay Cowie, Monica Crabtree, Janet Fletcher, Ken de Jong, Sun-Ah Jun, Claudia Kurz, Gina Lee, Sook-hyang Lee, Ho-hsien Pan, and Eric Vatikiotis-Bateson.

44 $15.00. 223 pp. (April 1994), edited by Jennifer J. Venditti: *Papers from the Linguistics Laboratory*. Papers by Gayle M. Ayers, Mary E. Beckman, Julie E. Boland, Kim Darnell, Stefanie Jannedy, Sun-Ah Jun, Kikuo Maekawa, Mineharu Nakayama, Shu-hui Peng, and Jennifer J. Venditti.

45 $15.00. 169 pp. (February 1995), edited by Stefanie Jannedy: *Papers from the Linguistics Laboratory*. Papers by Julie E. Boland & Anne Cutler, K. Bretonnel Cohen, Rebecca Herman, Stefanie Jannedy, Keith Johnson & Mira Oh, Hyeon-Seok Kang, Jaan Ross & Ilse Lehiste, Ho-Hsien Pan, and Shu-hui Peng.

46 $12.00. 114 pp. (Spring 1995), edited by Elizabeth Hume, Robert Levine and Halyna Sydorenko: *Studies in Synchronic and Diachronic Variation*. Papers by Mary Bradshaw, Brian Joseph, Hyeree Kim, Bettina Migge, and Halyna Sydorenko.

The following issues are available through either: The National Technical Information Center, The U.S. Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22151 (PB), or ERIC document Reproduction Service (ED) Center for Applied Linguistics, 161 N. Kent St., Arlington, VA 22209.

2 November 1968, 128 pp. (OSU-CISRC-TR-68-3). PB-182 596.

3 June 1969, 181 pp. (OSU-CISRC-TR-69-4). PB-185 855.

4 May 1970, 164 pp. (OSU-CISRC-TR-70-26). PB-192 163.

6 September 1970, 132 pp. (OSU-CISRC-TR-70-12). PB-194 829.

7 February 1971, 243 pp. (OSU-CISRC-TR-71-7). PB-198 278.

8 June 1971, 197 pp. (OSU-CISRC-TR-71-7). PB-202 724.

9 July 1971, 232 pp. (OSU-CISRC-TR-71-8). PB-204 002.

11 August 1971, 167 pp. ED 062 850.

12 June 1972, 88 pp. (OSU-CISRC-TR-72-6). PB-210 781.

13 December 1972, 255 pp. ED 077 268.

14 April 1973, 126 pp. ED (parts only)

15 April 1973, 221 pp. ED 082 566.

16 December 1973, 119 pp. ED (parts only)

Information Concerning OSDL
(Ohio State Dissertations in Linguistics)

Ohio State Linguistics Students are now making available dissertations written since 1992 by students in the linguistics department. For more information regarding available titles and abstracts as of January 1995, please visit our WWW (World Wide Web) Server at

http://ling.ohio-state.edu/Department/Dissertations.html

For more information and ordering procedures, please contact

osdl@ling.ohio-state.edu

or

OSDL (Ohio State Dissertations in Linguistics)
Department of Linguistics
Ohio State University
222 Oxley Hall
1712 Neil Avenue
Columbus, OH 43210-1289
USA

Currently available titles (February 1995):

Ao, Benjamin Xiaoping (1993) *Phonetics and Phonology of Nantong Chinese*. (Advisor: David Odden)

Chae, Hee-Rahk (1992) *Lexically Triggered Unbounded Discontinuities in English: An Indexed Phrase Structure Grammar Approach*. (Advisor: Arnold M. Zwicky)

Dai, John Xian-ling (1992) *Chinese Morphology and its Interface with the Syntax*. (Advisor: Arnold M. Zwicky)

Jun, Sun-Ah (1993) *The Phonetics and Phonology of Korean Prosody*. (Advisor: Mary E. Beckman)

Lee, Gina M. (1993) *Comparative, Diachronic and Experimental Perspectives on the Interaction between Tone and the Vowel in Standard Cantonese*. (Advisor: Brian D. Joseph)

Sook-hyang Lee (1994) *A Cross-Linguistic Study of the Role of the Jaw in Consonant Articulation*. (Advisor: Mary E. Beckman)

Welker, Katherine A. (1994) *Plans in the Common Ground: Toward a Generative Account of Conversational Implicature*. (Advisor: Craige Roberts)

Announcement

Some Software that has been developed in the Linguistics Laboratory at OSU is now publically available over the internet. The programs include utility programs that implement various data reduction techniques for the analysis of Electro-palatographic data (Hardcastle, Gibbon & Nicolaidis, 1991), an implementation of Robust Linear Predictive Coding (Lee, 1988), a version of the Klatt formant synthesizer (Klatt & Klatt, 1990) that produces Windows TIFF format (.WAV) files, and an experiment-running program for method of adjustment vowel perception experiments (Johnson, Flemming & Wright, 1993).

To access this software, use FTP to connect to *ling.ohio-state.edu*. Log in with the username *anonymous* and enter your email address as the password. The files are located in sub-directories in the *phonetics* directory. See the *readme* file in the phonetics directory and the readme files in the various sub-directories for more information.

Hardcastle, W.J., Gibbon, F. & Nicolaidis, K. (1991) EPG data reduction methods and their implications for studies of lingual coarticulation. *Journal of Phonetics* **19**: 251-266.

Johnson, K., Flemming, E., & Wright, R. (1993) The hyperspace effect: Phonetic targets are hyperarticulated. *Language* **69**:505-528.

Klatt, D.H. & Klatt, L. (1990) Analysis, Synthesis, and perception of voice quality variations among female and male talkers. *J. Acoust. Soc. Am.* **87**: 820-857.

Lee, C-H. (1988) On robust linear prediction of speech. *IEEE Trans. Acoust., Speech, and Signal Process.* **36**: 642-650.

Keith Johnson

Ohio State University Working Papers in Linguistics No. 46

Studies in Synchronic and Diachronic Variation

Table of Contents

Information concerning OSUWPL		iii-vi
Information concerning OSDL		vii
Announcement		viii
Mary Bradshaw	The Independent Development of Mid Tone in Suma	1
Brian Joseph	Diachronic Morphology: an Overview	16
Hyeree Kim	Divergence of Syntactic Frames and Diachronic Change	38
Bettina Migge	The Emergence of Creole Copulas: Evidence from Belize Creole	63
Halyna Sydorenko	The Diachronic Fragmentation of Modal *by* in Ukrainian	86

11

OSU Working Papers in Linguistics 46.1-15

THE INDEPENDENT DEVELOPMENT OF MID TONE IN SUMA[1]

Mary M. Bradshaw

0. *Introduction.* Tone change is not arbitrary (cf. Hyman 1978) but its motivation has not been clearly addressed. Motivations for tone change usually focus on phonetic explanations, which are necessarily limited. They account for the plausibility of a change, but they do not answer the question of why a new tone contrast developed.

One possible explanation for the appearance of new tone contrasts is that the burden of information carried by tones can be so great that tone split occurs. Henderson (1982) calls this sort of phenomenon 'avoidance of overlap'. Monino (1981) speculates that in the protolanguage of the Gbaya languages spoken in the Central African Republic and Cameroun the use of tone both lexically and grammatically led to a situation in which meaning could be obscured because the tone patterns could be interpreted in different ways. In other words, two phonological tones were too few to clearly express the information they encoded.

The Suma language is one of the Gbaya languages that was not included in Monino's comparative study. It differs from the other 3-tone Gbaya languages in that its mid tone developed from the tone sequence LH rather than from H. This paper will compare the tone changes that have led to the present tone system in Suma with those of

[1] I'd like to thank Rick Bradshaw, Brian Joseph, Bettina Migge, Dave Odden and Ruth Roberts-Kohno for helpful comments and discussion.

the 21 related Gbaya languages presented in Monino (1981) in order to establish the independence of the tone-splitting in Suma from that in other 3-tone Gbaya languages. In so doing, it will classify Suma with respect to the other Gbaya languages and fill in an important gap in Monino's comparative work. Furthermore, the question of why Suma developed a 3rd tone will be considered. Whether the motivation was internal or external will be addressed by examining the sorts of evidence that bear on borrowing and internal pressure for change. It will be argued that some internal pressure existed within the protolanguage which can best be explained in terms of an overload of the tonal system.

1. *Suma's Tone System.* Suma is a 3-tone Niger-Congo language spoken in the northwestern part of the Central African Republic. Three phonological tones form lexical contrasts in words like the following:

(1) kǔtǔ 'scabies of dogs & goats'
kūtū 'fog'
kútú 'certain tree - Papilíona'

The three tones are also used morphologically to contrast different tenses in verbs.

(2) kiri '(to/will) look for' fōk '(to/will) flow'
kirā '(has) looked for' fōkā '(has) flowed'
kiri 'looks for' fók 'flows'

More information on the 3-tone system can be found in Bradshaw (1995) from which the data in (1) and (2) is drawn.

2. *The Gbaya Languages.* Suma is a member of the group of Gbaya languages which are classified by Greenberg (1966: 9) as group 1 of the Eastern branch of the Adamawa-Eastern subfamily of the Niger-Congo family. They are identified by Samarin (1971) as group 1 of the Ubangi branch of the Adamawa-Ubangi subfamily. The Gbaya languages are spoken in the Central African Republic, Zaire and Cameroun and have been estimated to have around 1,200,000 speakers (Boyd 1989:192).

Monino (1981) further subdivides the Gbaya languages into 4 groups or zones: Central, Eastern, Northwest and Southwest. All of the groups except the last are characterized by 2 phonological tones--at least in Monino's study.

(3) Other Gbaya languages (Monino, 1981)

Central Group (2 tone)		Eastern Group (3 tone)	
Gbaya ɓokoto	Gbeya	ʔali	ngbaka-manza
Gbaya ɓozom	Gbanu	manza	ɓofi

Northwest Group (2 tone)	Southwest Group (2 tone)
Gbaya kara ɓodoe	Gbaya ɓiyanda
Gbaya kara ɓokpan	Gbaya toongo
Gbaya kara ɓomina	Gbaya ɓuli
Gbaya kara ɓugui	Gbaya mbodɔmɔ
Gbaya kara ɓoya	Bangando ngombe
Gbaya kara yaayuwee	
Gbaya lai	

The relationship between the different Gbaya languages seems to be very close, to the extent that they might be considered separate dialects rather than separate languages. Samarin (1966: 1-2) has described this relationship as follows:

> "Linguistically we are dealing with a more or less homogeneous unit, on the one hand, drastically differentiated at the extremes, where dialects are mutually unintelligible, but, on the other hand, only slightly, and sometimes erratically, differentiated at contiguous geographical points."

The comparative data also provides evidence of the close relationship between these languages. Words compared from the 22 languages (Monino's 21 and Suma) show in most cases a transparent connection with minimal differences. For example, the word for mouth is either /nú/ or /nū/ in all 22 languages. In the other examples that follow, all 22 languages are accounted for.

(4)

mouth:	nú, nū
pot:	kpánà, kpānā(1)
hoe:	wàrà, wàlà
tortoise:	tānā, tānā
work:	tòm, tō
rain:	kórò, kóró(1), kōró(1), kólò

Naturally, some of the words that have been compared are not found in all 22 languages, but the tokens that are found demonstrate an equivalent degree of similarity. Moreover, there is a large shared vocabulary among these languages.

3. *Monino's Comparative Study*. The historical developments within the Gbaya group have been dealt with only by Monino (1981, 1988, appendix to dissertation). As noted above, Suma is not included in his study. He takes the position that proto-Gbaya was a 2-tone language. Although he doesn't provide explicit arguments for this position, it seems to be based on the fact that the majority of the Gbaya languages have 2 phonological tones. Sixteen of the 21 languages he compares have 2-tone systems.

Monino also includes information about the 2-tone Gbanu language that provides a possible phonetic basis for the change from a 2-tone to a 3-tone system. In Gbanu, a word with a LH tone pattern is pronounced with a M tone after a word with a final H tone. In other words, LH is realized as M after a H in Gbanu. Taking together the phonetic justification for a change from 2 to 3 tones in the language group and the number of languages in the group that have 2 rather than 3 tones, there is justification for Monino's conclusion that proto-Gbaya was a 2-tone language.

Monino classifies the 5 three-tone languages as forming a separate group, the Eastern group, and his reason for doing so seems to be tonal. In fact, 4 of these 5 languages have virtually identical tone systems. It is questionable whether similarity in tone systems is enough to establish a genetic relationship. However, I will show that some segmental evidence supports this subgrouping.

Monino suggests that the development of the 3rd tone in these languages was due to an overload on the tone system, as mentioned above. This idea is intuitively satisfying but Monino provides little evidence to support it. Evidence from Suma, however, can provide some support for such a hypothesis, as I will show in section 8.

4. *Lexical Tone Changes: Suma vs. the Eastern Group.* The lexical tone changes in Suma differ from those in the other 3-tone Gbaya languages which make up the Eastern group. Where the Eastern group have M, Suma has H like the 2-tone languages[2].

(5)		Suma	3-tone	2-tone
	cane rat	bíā́	biā̄	bíā́
	mouth	nú̄	nū̄	nú́
	oil	nɔ̰́	nɔ̰̄	nɔ́
	firewood	gúā́	gūā̄	gúā́

A comparison of Suma to the other Gbaya languages reveals two lexical tone changes. The important change for the purpose of the present study is the correspondence between LH in the two-tone languages and M in Suma. The other 3-tone languages have LM corresponding to LH, as expected from the postulated tone change whereby H became M in the Eastern group.

(6)		Suma	3-tone	2-tone
	hippo	ŋgūɓū	ŋgūɓū	ŋgùɓú
	fog	kūtū	kūtū	kùtú
	liquor	dɔ̰̃ɔ̰̃	dɔ̰̃ɔ̰̃, dɔ̰̀kɔ̰̃	dɔ̰̀ɔ̰́, dɔ̰̀kɔ́
	side dish	kpṍṍ	kpṍṍ	kpɔ̀ɔ́
	coldness	gɛ̰̃ɛ̰̃	gɛ̰̃ɛ̰̃	gɛ̰̀ɛ́

[2] Underlined vowels are nasalized.

The second tone change in Suma is indicated by a correspondence between LH in Suma and H in the 2-tone languages following a voiced obstruent. This kind of tone change after a depressor consonant is well-attested crosslinguistically and has been phonetically motivated by the intrinsic properties of obstruent voicing. It is postulated to follow the tone change whereby LH became M. Because it played no role in the development of Suma's 3rd tone, it will not be discussed here.

(7) Lexical Tone Changes

a. Suma:	LH > M
b. Eastern group:	H > M

5 *Grammatical Tone Similarities.* Although the lexical tones in Suma and the Eastern group are different and seem to indicate different tone changes, grammatical tones show similarities. The use of grammatical tone in Suma is most evident in verb tenses and in the associative construction. Verbs in Suma are underlyingly toneless. Their surface tones are morphological tones which indicate the tense of the verbs. A comparison between Suma and the Eastern group shows identical morphological tones in the perfective tense which contrast with the perfective tones of the 2-tone groups. One member of the Eastern group, Bofi, has a slightly different tone morphology. In the imperfective, no tone differences are evident except for the LH pattern after voiced obstruents in Suma, which was referred to in section 4, and the pattern found in Bofi.

(8) Morphological Tone Patterns on Verbs

	Imperfective	Perfective
2-tone	H	LH
Suma	H (LH)	M
Eastern	H	M
Bofi	MH	LM

These tone patterns can be illustrated with the verb 'come' in (9).

(9)

'come'	Imperfective	Perfective
2-tone	tɛ́	tɛ̌á
Suma	tɛ́	tɛ̄á
Eastern	tɛ́	tɛ̄, tɛ̄á
Bofi	tiá	tiā

Similarities also exist between Suma and the Eastern group of 3-tone languages in the associative construction, which expresses a relationship between nouns. It is realized phonologically through a floating tone feature in Suma (Bradshaw, 1995). Nouns with L or HL tone patterns in isolation surface with M and H tone patterns respectively in the associative construction. Other tone patterns do not alternate.

BEST COPY AVAILABLE

(10) Associative Construction in Suma (3-tone)

H	nú	nú gɔ̀	'panther's mouth'
L	bèrè	bèrè bágàrà	'cow's teat'
LH	bɛ̌y	bɛ̌y àlà	'person of suffering'
HL	kpánà	kpánà gèdâ	'pot of manioc'
M	dɔ̄ɔ̄	dɔ̄ɔ̄ mbúrú	'palm wine'

In the Eastern group, the same tone alternations are found as well as alternations in nouns with M or LM tone patterns. These become H and LH respectively.

(11) Eastern group: ali (3-tone)

H	kpóm	tûlû kpóm kɛ̀	'this one item of clothing'
L	zù	zù sàdî	'animal's head'
LM	ndârá	ndârá yérè	'buffalo skin'
HL	kúlì	kúlì kórá	'chicken egg'
M	nû	nû sàdî	'animal's mouth'

In the 2-tone languages, all nouns in the relevant environment alternate tonally except those with a H tone pattern. L nouns become H or LH, depending on their mora count; LH nouns become L; and HL nouns become H.

(12) Gbaya kara bodoe (2-tone)

H	nú	nú bàn	'mouth of a red monkey'
L	zù	zù gɔ̀	'panther's head'
	fùù	fùù gèdâ	'manioc flour'
LH	kôtó	kôtô sámbi	'sheep skin'
HL	kúi	kúi kórá	'chicken egg'

The conditions on the tone alternations are more restrictive in the case of the 2-tone languages than in the 3-tone languages, including Suma. These restrictions will be described briefly in section 8. The similarities and differences in the tone alternations can be seen in (13).

(13) Associative Construction Tone Alternations

2-tone	3-tone	Suma
H → H	H → H	H → H
L → H, LH	L → M	L → M
LH → L	LM → LH	LH → LH
HL → H	HL → H	HL → H
	M → H	M → M

6. *Segmental Evidence*. The similarities in the grammatical tones of Suma and the Eastern group might lead to the conclusion that the development of a 3rd tone in Suma

was an innovation shared with the Eastern group. Segmental evidence points in the opposite direction. Segmental correspondences indicate that Suma should be grouped together with the 2-tone Central languages, Gbeya, Gbaya Bozom and Gbaya Bokota and separate from the 3-tone Eastern languages. The significant segmental correspondences are y/r/l/ɭ reconstructed as *l, nz/z reconstructed as *nz, and the word-final r/V correspondence reconstructed as *r.

The nz/z correspondence separates Suma from the other 3-tone languages. This suggests that proto-Gbaya split originally into 2 groups, proto-Eastern Gbaya and proto-NonEastern Gbaya, in which proto-NonEastern Gbaya was characterized by a segmental change: *nz > z. Suma originates from the nonEastern group which is characterized by 2 rather than 3 tones.

(14)

	3-tone	2-tone	Suma
outdoors	nza, nzan	zan	zan
balaphone	nzaŋa	zaŋa	zaŋa
suck	nzɔɓi	zɔɓi, zɔ̀mɪ	zɔ̀mɪ
newborn	nzɔ, nzɔdi	mbɔ-zɔ, mbɔ-zɔdi	zɔ-bem

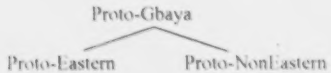
The nz/z correspondence is reconstructed as *nz rather than *z because of the presence of a z/z correspondence, as shown in (15).

(15)

	3-tone	2-tone	Suma
belly	zaŋ, za	zaŋ, za	zaŋ
top	zu	zu	zu
grass	zɔ	zɔ	zɔ
young woman	zɔŋa	zɔŋa	zɔŋa

Thus there is some evidence for an initial language division.

(16)



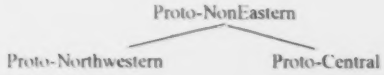
The *y/r/l/ɭ correspondence places Suma with the 2-tone Central languages including Gbeya, Gbaya Bozom and Gbaya Bokota.

(17) y/r/l/ɭ correspondence in NonEastern subdivision

	NW	Central (& Suma)	Eastern (3-tone)
iron	boyo	boro	bolo, boɭo
water	yɪ	rɪ	lɪ, ɭɪ
dog	toyo	toro	tolo, toɭo, to
fruit	waya	wara	wala, waɭa

This is reconstructed as *ɭ because there are separate correspondence sets for [l], [r] and [y]. This correspondence provides evidence of a further division of the nonEastern group of Gbaya languages into the Northwestern and Central groups. Suma falls within the Central group.

(18)



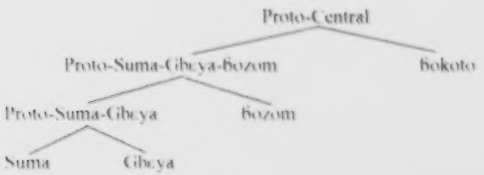
The word-final correspondence r/V serves to subgroup Suma within the Central languages. In Suma, Gbɛya and Gbaya ɓozom, final /r/ was lost resulting in vowel lengthening in nouns. In Suma and Gbɛya, this phenomenon generalized to include all words.

(19).

		Suma	Gbɛya	ɓozom	ɓokoto
NOUNS:	cord	pɛɛ	pɛɛ	pɛɛ	pɛr
	back	kɔɔ	kɔɔ	kɔɔ	---
	rainy season	ʻmaa	ʻmaa	ʻmaa	ɓar
	way	ɗɔŋ-waa	waa	ri-waa	war
VERBS:	attach	hɛɛ	hɛɛ	hɛr	hɛr
	hit	mbɛɛ	mbɛɛ	mbɛr	mbɛr
	count	tɔɔ	tɔɔ	tɔri	tɔr
	stand	kuu	kuu	kur	kur
	push	ʔu	ʔu	ʔur	ʔur
	twist cloth	ʻmaa	ʻmaa	ʻmar	---

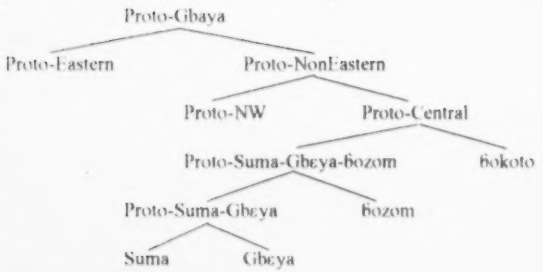
Thus, a further subdivision is suggested within the Central Group such that Proto-Central divided into Gbaya ɓokoto and Proto-Suma-Gbɛya-ɓozom; and the latter further divided into Gbaya ɓozom and Proto-Suma-Gbɛya.

(20)



The preceding and other segmental evidence clearly places Suma within the Central group of languages historically. Since Suma groups with other 2-tone languages, this is evidence that the 3-tone languages branched off before a 3rd tone developed in Suma.

(21)



7 *Tonal Evidence vs. Segmental Evidence*. If the segmental evidence suggests independent development and the tone evidence suggests common development, which should be given more weight? Segmental evidence is more reliably established as an indi-cator of relatedness. Moreover, in the case of Suma, the tonal evidence is less straightfor-ward than the segmental evidence and the tone similarities can be explained in other ways.

The tonal evidence points in different directions depending on whether lexical tones or grammatical tones are compared. The differences in lexical tones between Suma and the Eastern group suggest an independent development of the 3rd tone. The grammatical tones suggest the opposite. But even if the grammatical tones are considered alone, there are reasons to downplay their significance as evidence for tone change. Considering first the associative construction, the grammatical tones are similar for Suma and the Eastern languages, but they are also similar for the entire group of Gbaya languages. Although the similarities are more pronounced between Suma and the Eastern group, the similarity generally reflects the similarity of the Gbaya group as a whole. Since these similarities involve raising effects caused by a morphological floating tone or tone feature, similar effects can be expected in closely related 3-tone languages regardless of whether the 3rd tone develops independently in 2 groups or not.

The grammatical tones on verbs, while virtually identical for Suma and the Eastern group, also involve floating tones, which renders the similarities less convincing as evidence of common development. These similarities can be plausibly explained within the hypothesis that Suma's 3rd tone was an independent innnovation. The inverse is not true for the segmental evidence.

The grammatical tones in the imperfective are the same for all the Gbaya languages, ignoring ɓofi. No change occured in this tone morpheme. The tones of the perfective, however, show a similarity for Suma and the Eastern group that diverges from the 2-tone languages and, presumably, the protolanguage. As noted above, Suma and the Eastern group, excluding ɓofi, have a M tone pattern on perfective verbs; ɓofi has a LM pattern; and the 2-tone languages have a LH tone pattern.

BEST COPY AVAILABLE

(22) Verb Similarities

	Imperf	Perf
2 tones (& proto-Gbaya)	H	LH
Suma	H	M
3-tones	H	M
Bofi	MH	LM

These facts can be accounted for in terms of changes to the tonal morpheme, which is taken to be LH in the protolanguage. In Suma, as expected, this LH morpheme became M. In Bofi, as expected, the H portion of this LH morpheme became M, resulting in a LM morpheme. In the other 3-tone languages of the Eastern group, it is most probable that there was a stage in which the perfective morpheme was also LM. Subsequently the L portion of the tone pattern could have been reanalyzed as a default tone, with the perfective morpheme being reanalyzed as a M tone. Eventually, the M tone would have spread to all tone bearing units on the verb in perfective tense. While I have no evidence that L is a default tone in these languages, L does appear to be a default tone in Suma (Bradshaw, 1995) which adds credibility to this kind of explanation.

An attempt to weigh the tonal and segmental evidence pertaining to the issue of whether Suma's 3rd tone was an independent development leads to the conclusion that the segmental evidence is stronger than the tonal evidence. Thus, the 3rd tone in Suma must have developed independently.

8 *Motivation for the Tone Change: Internal.* The motivation for the development of a 3rd tone must be either language internal or language external. The evidence for Suma suggests that it was language internal. The phonetic evidence from Gbanu, given above, that there is a conditioned allophonic M in at least one of the 2-tone languages points to a language internal motivation. Moreover, the regularity of the tonal change, affecting as it does all of the *LH tone patterns in the core vocabulary, is strong evidence of internal motivation. If regularity of sound change shows the genetic relationship between languages, it also demonstrates the developmental relationship between a protolanguage and its descendant. Such a relationship is internally motivated. Although regularity of tone change is not as firmly established as the regularity of segmental change, the same principle can be applied to both. There's no reason to believe that this principle means something different for tones than for segments.

Not only is there evidence for language internal motivation, but there is evidence that tends to support the hypothesis that the internal motivation can be more specifically attributed to an overload of the tone system. In the Gbaya languages, tones are used both lexically and grammatically to convey information within a linguistic system characterized by one and two syllable words and few affixes. The potential of an expanded tonal inventory to relieve such an overload can be illustrated by the case of the associative construction.

The associative construction affects only nouns in Suma but it apparently affects the relationship between verbs and objects as well as other parts of speech in other Gbaya languages. The focus here will be on nouns.

In a 2-tone system, such as Gbeya, tones on nouns alternate in the associative construction for all tone patterns except H. A raising effect is observed whereby HL is realized as H; L is realized as H or LH, depending on the number of mora. Furthermore, LH is realized as L. Such alternations depend on the presence not only of the associative morpheme but also on the presence of the correct tonal environment. In Suma, there are many more lexical tone patterns and a smaller percentage of them alternate. To recapitulate, a HL pattern is realized as H and a L pattern is realized as M. The H, LM, HM and MH patterns do not alternate. Thus, in the 2-tone systems, 75% of the tone patterns alternate, while in Suma only 25% do.

(23) Tone Alternations of Nouns in the Associative Construction

2 tone systems	Suma	
H – H	H – H	M – M
HL → H	HL → H	LM – LM
L → H, LH	L → M	HM – HM
LH → L	LH – LH	MH – MH

It should be clear that the expanded tonal inventory of Suma allows less possibility of overlap or confusion between different nouns. This can be illustrated by minimal pairs in the 2-tone Gbeya language that are neutralized in the associative construction.

(24) Minimal Tone Pairs from Gbeya (Samarin, 1966)

nú 'mouth'	gó 'when (conn.)'	fûk 'meadow'
nû 'ground'	gô 'stony area'	fûk 'flour'
kóy 'squirrel'	kútú 'ctn. tree'	bórô 'lower spine'
kŏy 'handle'	kútù 'temporary hut'	bŏrô 'hole in a tree'

The contrasts between these pairs are neutralized when the tones on the relevant nouns alternate in the associative construction in Gbeya. The same minimal pairs, when they occur in the 3-tone Suma language are not usually neutralized. That is, the nouns with a lexical H tone pattern do not seem to have HL counterparts which would be expected to alternate with a H pattern. Some nouns, which contrast a L tone pattern with a M tone pattern, are neutralized in Suma, as is shown with *kùtù* 'scabies of dogs and goats' vs. *kútù* 'fog'. Such nouns are rare.

It should be noted that, at least for the examples given, those not neutralized by Suma are very commonly used. Those that are neutralized, that is, 'fog' and 'scabies of dogs and goats', occur less frequently and are unlikely to promote confusion.

(25)

Gbɛya	Suma
nû → nú	nû → nū
fûk → fúk	fûk → fūk
kôy → kóy	kôy → kōy
gô → gó	gô → gō
bórô → bóró	
kútû → kútú	kùtù → kūtū

If 3-tone Gbaya languages such as Suma respond to internal pressure from tonal overload by expanding their tonal inventory, how do the 2-tone languages cope? Although the details are beyond the scope of this paper, there is a general difference between the 3-tone and 2-tone Gbaya languages in the associative construction. In the 3-tone languages, the tone alternations occur on nouns with the appropriate tone pattern whenever the associative construction is used. In the 2-tone languages, the tone alternations depend on the presence of a following L tone. Thus, in the 2-tone languages, the tone alternations occur less frequently. It is not clear whether the change in the conditions on a rule of tonal alternation in the associative construction preceded or followed the change in tone inventory; but it is clear that a balance was achieved in 2 different ways depending on whether the tone system included 2 or 3 phonological tones.

9 *Motivation for Tone Change: External.* An alternative explanation for the development of the 3rd tone is that it was externally motivated, namely, the result of borrowing or some other kind of language contact. Borrowing was possible due to the presence of other 3-tone languages in the same general area as Suma. The Suma-speaking area is bordered by a Mbum area, a Gbɛya area and a Sara area. Nearby are Banda-speaking areas. The Mbum languages and Gbɛya are 2-tone systems, while the Sara languages and Banda are 3-tone systems. Historical contact with 3-tone languages was certainly possible and we cannot rule out the possibility of borrowing.

The mere possibility of borrowing without any positive evidence to support it affords little insight into the historical forces at work in the development of Suma's 3rd tone. Various kinds of evidence would attest to the operation of borrowing. We might expect to find some irregularity in the tone change itself or we might expect irregularity in its distribution such that, for example, the 3rd tone would be found more commonly in peripheral rather than core vocabulary. Instead the tone change is strikingly regular and the core vocabulary seems to exhibit it to the same extent as the peripheral vocabulary. Another kind of evidence, attesting to interdialectal borrowing, might consist of finding unusual items that are common to two dialects but odd in relation to others, and such evidence does exist. However, it points to borrowing between Suma and 2-tone Gbɛya, as illustrated in (26). No such evidence has been uncovered for borrowing between Suma and another 3-tone Gbaya language. Clearly, this does not support the hypothesis that the 3rd tone was borrowed.

23 BEST COPY AVAILABLE

(26) Interdialectal borrowing:

	Suma	Gbɛya	Others
death	fey	fey	fio
hunt	yari	yari	gia
tree shrew	laŋga	laŋga	kpela

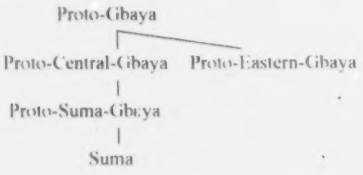
A further kind of evidence that would support a borrowing theory is evidence of some kind of dominance relationship. Although at present, the neighboring Gbɛya language enjoys increased prestige in that the prefecture capital is located in a Gbɛya-speaking area, there is no reason to believe that such a relationship existed in precolonial times. Furthermore, such a relationship would not support the theory that the 3rd tone was borrowed, since Gbɛya is a 2-tone language.

Historical and cultural studies fail to turn up evidence in favor of a dominance relationship that would lead to borrowing. Historical studies (Burnham 1980b, Cordell 1983, 1984) indicate that Suma was not within the domain of any African empires precolonially and that the Suma were not subject to slave-raiding though it occurred to the north and to the west of them. Cultural studies (Burnham 1980a, Richard Bradshaw p.c.) indicate that Suma society is an essentially democratic one in which people vote with their feet. When village people do not like what the village chief is doing, they move away.

There seems to be no evidence of any borrowing from a 3-tone language that would support the notion that the development of a 3rd tone in Suma was the result of borrowing. This lack of evidence, coupled with evidence supporting the theory that the 3rd tone was internally motivated, leads to the conclusion that any explanation of this tonal development would have to depend on internal motivation.

10. *Conclusions.* This paper has demonstrated through the use of segmental and tonal correspondences that the development of a third tone in Suma was independent of the development of a third tone in other Gbaya languages. The genetic relationship of Suma to the other Gbaya languages and to proto-Gbaya can be illustrated as follows:

(27)



Motivation for the development of the third tone was internal rather than external. The independent development of a third tone in at least two separate instances in closely related languages lends credence to an explanation for change based on some internal pressure within the larger language group to expand the tonal inventory. Such internal pressure is best explained by the idea that the two tone system was overloaded in terms of the information it was forced to convey.

References

Boyd, R. 1989. Adamawa-Ubangi. The Niger-Congo languages, ed. by J. Bendor-Samuel (pp. 178-215). Lanham MD: University Press of America.

Bradshaw, M. 1995. Tone on Suma verbs. Theoretical approaches to African linguistics, ed. by A. Akinlabi. Africa World Press.

Bradshaw, R. & P. Sankpam. 1984. Suma Language Dictionary. Unpublished ms.

Burnham, P. 1980a. Opportunity and constraint in a savannah society. The Gbaya of Meiganga, Cameroon. London: Academic Press.

Burnham, P. 1980b. Raiders and traders in Adamawa: Slavery as a regional system. Asian and African systems of slavery, ed. by James L. Watson. Berkeley & Los Angeles: University of California Press.

Cordell, D. 1984. Dar al-Kuti and the last years of the Trans-Saharan slave-trade. Madison: University of Wisconsin Press.

Cordell, D. 1983. The Savannah Belt of North-Central Africa. History of Central Africa, Vol. 1, ed. by D. Birmingham & P. Martin. London: Longman.

Henderson, E. 1982. Tonogenesis: Some recent speculations on the development of tone. Transactions of the Philological Society. Oxford: Basil Blackwell.

Hyman, L. 1978. Historical tonology. Tone: A linguistic survey. Academic Press.

Monino, Y. 1988. Lexiques Comparatif des Langues Oubanguiennes. LACITO, Paris.

Monino, Y. 1981. De deux a trois tons, l'evolution tonale dans les Langues Gbaya-Manza-Ngbaka. Tons et Accents dans des Langues Africaines, ed. by Guarisma. LACITO, Paris.

BEST COPY AVAILABLE

Momino, Y. Appendix to dissertation. Offprint.

Samarin, W. 1971. Adamawa-Eastern. Linguistics in Sub-Saharan Africa, CTL 7 (pp. 213-244). The Hague: Mouton.

Samarin, W. 1966. The Gbaya Language. Berkeley & Los Angeles: University of California Press.

OSU Working Papers in Linguistics 46, 16-37

DIACHRONIC MORPHOLOGY: AN OVERVIEW

Brian D. Joseph
The Ohio State University

As synchronic morphological theory has flourished in recent years, evidenced by the recent spate of books in this area (e.g. Anderson 1992, inter alia), it is important to realize that, as with all aspects of language (and indeed of human institutions in general), a diachronic perspective is possible as well, focusing on what happens to morphology through time. Thus in this paper, several questions are addressed which are diachronic in their focus:[1]

- what can change in the morphological component?
- what aspects of the morphology are stable?
- where does morphology come from?
- what triggers change in the morphology?
- is a general theory of morphological change possible?

Moreover, through the answers given to these questions, but especially the first two, several examples of various types of morphological change are presented as well.

[1]I gratefully acknowledge a fellowship from the American Council of Learned Societies Joint Committee on Eastern Europe and a sabbatical leave from the College of Humanities, The Ohio State University, both of which enabled me to produce the present piece. This paper is a preliminary version of what will be a chapter in *Handbook of Morphology*, edited by Arnold Zwicky and Andres Spencer (Blackwell Publishers, 1996). Thanks are due to Rex Wallace, Nigel Vincent, and Richard Janda for helpful comments. I dedicate this paper to the memory of Joki Schindler, who taught me most of what I know about morphological change.

1. What can change? What is stable?

The easy answer here is that just about everything that might be thought of as constituting morphology is subject to change, especially so once one realizes that regular sound change can alter the shape of morphs without concern for the effect of such a change in pronunciation on the morphological system;[2] thus, for example, once-distinct case-endings can fall together by regular sound change (as a type of "syncretism"), as happened with the nominative plural, accusative plural, and genitive singular of (most) consonant-stem nouns in Sanskrit.[3] Still, morphological change goes beyond mere change induced by sound change, affecting not just the actual realizations of morphemes but also the categories for which these forms are exponents and the processes and operations by which these forms are realized. Thus it is possible to find change in the form taken by the various types of inflectional morphology, such as markings for person, number, gender, agreement, case, and the like, as well as the addition or loss or other alteration of such categories and the forms that express them; in the derivational processes by which stems are created and modified, and in the degree of productivity shown by these processes; in the morphological status (compound member, clitic, affix, etc.) of particular elements; in the overt or covert relationships among morphological elements, and more generally, in the number and nature of the entries for morphemes and words in the lexicon, etc. Some examples are provided below.[4]

For instance, the category of person in the verbal system of Greek has seen several changes in the form assumed by specific person (and number) endings. Ancient Greek allomorphy between *-sai* and *-ai* for the 2SG MEDIOPASSIVE PRESENT ending (generally[5] distributed as *-sai* after consonants, e.g. perfect indicative *tétrip-sai* 'you have (been) rubbed ((for) yourself)', from *trîb-ô* 'rub', and *-ai* after vowels, e.g. present indicative *timâi* 'you honor (for) yourself', contracted from /timae-ai/, or *lúêi* 'you are unloosing for yourself', contracted from /lúe-ai/) has been resolved (and ultimately, therefore, reduced) through the continuation of a process begun in Ancient Greek (note vowel-stem middle

[2]This statement conceals a large controversy which cannot adequately be discussed here, namely whether sound change is a purely mechanical phonetic process that is blind to the specific morphemes and words it operates on and to their morphological composition, e.g. whether they are morphologically complex or monomorphemic. Thus in principle, one could imagine that sound changes could be morphologically conditioned, and so could fail to apply in, or could apply only to, certain categories or particular morphemes. The evidence, however, seems to be in favor of viewing sound change as being only phonetically conditioned in its outcome at least, with apparent cases of nonphonetic (so-called "grammatical") conditioning being the result of phonetically conditioned sound change followed by analogical (morphological) change. See Hock 1976 for some discussion and relevant literature.

[3]These endings all have the form *-as* in Sanskrit, but, as comparisons with other Indo-European languages show, they derive from three different sources (GEN SG *-os, cf. Greek *pod-os* 'of a foot', NOM PL *-es, cf. Greek *pód-es*, ACC PL *-ns, cf. Greek *pód-as*).

[4]These examples are drawn primarily from the languages I know best and thus am best able to vouch for; they therefore have what might be perceived as an Indo-European bias. However, there is every reason to believe that the same types of examples are to be found in other languages, and that the phenomena illustrated here are not Indo-European-only types of changes. See, for instance, Bloomfield (1946: §18-20), Anttila (1972: 91, 97), Robertson 1975, Hock (1991: 200-2), and Dai 1990 for some examples from Algonquian, Estonian, Mayan, Maori, and Mandarin Chinese, respectively, to mention just a few well-established cases from other language families.

[5]But see below regarding forms like *deiknusai* that disturb this otherwise regular allomorphic pattern.

BEST COPY AVAILABLE

forms like *deíknu-sai* 'you are showing (for) yourself' already in Classical Greek) that resulted, via the extension of one allomorph into the domain of the other, in the generalization of the postconsonantal form into all positions in Modern Greek, giving, e.g. *timáse* 'you honor yourself' (as if from earlier *tima-sai). Similarly, in some Modern Greek dialects, the ending for 3PL.MEDIOPASSIVE.IMPERFECTIVE.PAST has innovated a form *-ondustan* from the *-ondusan* found elsewhere; the involvement (via a type of change often referred to as contamination or blending) of the 1PL/2PL endings *-mastan* / *-sastan* is most likely responsible for the innovative form, inasmuch as the innovative form shows the introduction of an otherwise unexpected *-t-* in exactly the same point as in the 1PL/2PL endings.[6] As a final example, from verbal endings but from a different language group, there is the case of the West Germanic 2SG.ACTIVE ending; the inherited ending from Proto-Germanic was *-iz (as in Gothic *-is*), yet it underwent the accretion of a marker *-t*, giving forms such as Old English *-est*, Old High German *-ist*, which is widely held to be a reflex of an enclitic form of the second person pronoun *þu* bound onto the end of a verbal form (thus probably the result of cliticization, on which see below).[7]

A change in the realization of number marking alone can be seen in the familiar case of the nominal plural marker /-s/ in English, for it has been spreading at the expense of other plural markers for centuries. For instance, the earlier English form *shoo-n*, as a plural of 'shoe', with the plural ending *-n* still found in *oxen*, has given way to *shoe-s*, with the most frequent and indeed default plural ending *-s*; in this case, the marker has not passed from the language altogether, as *oxen* shows, but the domain of a particular marker has come to be more and more restricted and that of another has been expanded. The "battleground" here in the competition between morphemes is constituted by particular lexical items and the markings they select for.[8]

Somewhat parallel to such changes in the form of endings themselves are changes in effects associated with the addition of such endings. The affixation of the plural marker /-s/ in English occasions voicing of a stem-final fricative with a relatively small set of nouns, all inherited from Old English, e.g. *loaf* ([lowf]) / *loaves* ([lowv-z], *house* ([haws]) / *houses* ([hawz-əz]), *oath* ([owθ]) / *oaths* ([owð-z]), etc., though the default case now is to have no such voicing, as indicated by the fact that nouns that have entered the language since the Old English period do not participate in this morphophonemic voicing, e.g. *class*, *gaff*, *gas*, *gauss*, *gross*, *gulf*, *mass*, *oaf*, *puff*, *safe*, *skiff*, etc. Many nouns that do show this voicing are now fluctuating in the plural between pronunciations with and without the voicing, so that [owθs] for *oaths*, [(h)worfs] for *wharves*, and [hawsəz] for *houses* can be

---

[6]The Ancient Greek innovative 1DUAL.MEDIOPASSIVE ending *-methon*,which filled a gap in the paradigm (note the absence of a 1DUAL.ACTIVE form) and seems to have arisen as a blend of 1PL.MEDIOPASSIVE ending *-metha* with the 2DUAL.MEDIOPASSIVE ending *-sthon* (note also the 2DUAL.ACTIVE *-ton*), provides another example of a change in a personal ending due to blending.

[7]The enclitic form, occurring as it does with a stop, presumably reflects a combinatory variant of *þu* after a sibilant.

[8]See Anderson 1988 for discussion of the spread of the *s*-plural in English; he argues that the mechanism is one of the elimination of lexically specified idiosyncrasies and the emergence of the default marking; he notes that this interpretation is consistent with, and in fact predicted by, the principle of disjunctive ordering for morphological rules. For a similar example from German, where an *-s* marking for plural is spreading, see Janda 1990.

heard quite frequently.[9] It is likely that the innovative pronunciations will eventually "win out", thereby extending the domain of the default plural marking and essentially assimilating this class of nouns to the now-regular class.[10]

The creation of new markers also represents a change. Thus when the early Germanic nominal suffix *-es-, which originally was nothing more than a stem-forming element, i.e. an extension onto a root to form certain neuter noun stems, as indicated in the standard reconstruction NOM.SG *lamb-iz 'lamb' versus NOM.PL *lamb-iz-ā,[11] was reinterpreted after sound changes eliminated the final syllable of the singular and plural forms, as a marker of the plural, a change in the marking of (certain) plural nouns in Germanic came about.[12] The ultimate form of this marker, *-(e)r* with the triggering of umlaut in the root (e.g. OHG nominative singular *lamb* / nominative plural *lembir*, NHG *Wort* / *Wort-er* 'word/words') reflects the effects of other sound changes and reinterpretations involving umlaut in the root triggered by suffixation.[13]

With regard to case markings, one can note that evidence from unproductive "relic" forms embedded in fixed phrases points to an archaic Proto-Indo-European inflectional marker *-s for the genitive singular of at least some root nouns, which was then replaced in various languages for the same nouns as *-es or *-os, which existed as allomorphic variants already in Proto-Indo-European in use with different classes of nouns. For example, the Hittitte form *nekuz* 'of evening' (phonetically [nekᵘt-s]), in the fixed phrase *nekuz mehur* 'time of evening', with its *-s ending, can be compared with Greek *nukt-ós*, Latin *noct-is*, with the innovative endings *-os/-es.[14] Similarly, the genitive ending *-os (as above, with a variant *-es) which can be inferred for *n*-stem noun such as *ónо-ma* 'name'

---

[9]For instance, [owθs] and [(h)worfs] are given in *AHD* (1992) as (innovative) variants; [hawsəz], while common in Central Ohio at least, has not yet been enshrined in the dictionary.

[10]As with the spread of the *s*-plural (see footnote 8), this loss of morphophonemic voicing can be seen as the removal of an idiosyncratic specification from the lexical listing of each such noun. See also Anttila (1972: 126-127) for discussion of this example and of parallel ones involving consonant gradation from Baltic Finnic. It should be noted that occasionally, the idiosyncratic marking has spread to a noun not originally undergoing this process; for example, *dwarf* originally had no overt plural marker in Old English, so that the variant plural *dwarves*, alongside the synchronically more regular *dwarfs*, represents a spread of the synchronically irregular pattern.

[11]See, for example, Prokosch 1938 for this reconstruction.

[12]The situation is actually a bit more complicated, as is clear from the fact that early Old High German had *-ir-* in some singular forms, specifically the genitive and the dative; as the suffix came to be interpreted purely as a marker of number, as the nominative forms would lead a speaker to surmise, it disappeared from the genitive and dative singular. See Anderson 1988 for further discussion, and an interpretation in terms of changes in lexical specifications.

[13]Note also that since in earlier stages of Germanic, *Wort* did not have this plural marking (cf. OHG SG *wort* / PL *wort*), the extension of this umlaut-plus-*(e)r* plural marking is a process parallel the example given of the *-s* plural in English; see also footnotes 8 and 12.

[14]That this archaic inflection is embedded in a fixed phrase (similarly also Vedic Sanskrit *dan* 'house/GEN.SG', from *dem-s, found in the fixed phrase *patir dan* 'master of the house') is not surprising, for it shows the retention of an older pattern in what is in essence a synchronically unanalyzable expression (like an idiom). From a methodological standpoint in doing historical morphology and morphological reconstruction, it is often useful to look to such expressions for clues as to earlier patterns.

(with *-ma* from *-mn)[15] in Pre-Greek based on the evidence of Sanskrit *nāmn-as* and Latin *nomin-is* 'of a name'[16] underwent a cycle of changes in historical Greek. It was first altered through the accretion of a *-t-*, giving *-tos* (e.g. *onóma-tos*); although the exact source of this *-t-* is disputed and although it is found ultimately in other cases, it seems to have arisen earliest with the genitive, and so its appearance perhaps shows some influence from an ablatival adverbial suffix *-tos found in forms such as Sanskrit *ta-tas* 'then, from there' or Latin *caeli-tus* 'from heaven'.[17] Whatever its source, though, it at first created a new genitive singular allomorph *-tos*, yet later when this *-t-* was extended throughout the paradigm, giving forms such as the dative singular *onóma-t-i* (for expected **ónomn-i*, cf. Sanskrit locative *nāmn-i*), the *-t-* became a virtual stem extension. At that point, one could analyze *ónoma* as having been "relexicalized" with a different base form /onomat-/, thereby reconstituting the genitive ending again as *-os* for this noun class.

Another relatively common type of change in the realization of case-endings involves the accretion of what was originally a postposition onto a case-suffix, creating a virtual new case form. This process seems to have been the source of various "secondary local" cases in (Old) Lithuanian (Stang 1966:175-6, 228-32), such as the illative, e.g. *galvôn* 'onto the head', formed from the accusative plus the postposition **n* (with variant form **na*) 'in' (probably connected with Slavic *nā* 'on') and the allative, e.g. *galvôspi* 'to(ward) the head', formed from the genitive plus the postposition **pie* (an enclitic form of *priẽ* 'at'), where influence from neighboring (or substrate) Balto-Finnic languages is often suspected as providing at least a structural model.[18] Similar developments seem to underlie the creation of an innovative locative in Oscan and Umbrian, e.g. Oscan *hùrtín* 'in the garden' (so Buck 1928:114), where a postposition *en* is responsible for the form of the ending, and may be viewed in progress in the alternation between a full comitative postposition *ile* 'with' in modern Turkish (e.g. *Ahmet ile* 'with Ahmet', *Fatma ile* 'with Fatma') and a bound suffix-like element *-(y)le* (with harmonic variant *-(y)la*) e.g. *Ahmetle*, *Fatmayla*).[19] It should be noted, however, that though common, the development these combinations apparently show, from noun-plus-free-postposition to noun-plus-case-suffix, is not unidirectional; Nevis (1986), for instance, has demonstrated that in most dialects of Saame (also known as Lappish) an inherited sequence of affixes *-pta-k-ek/n marking abessive has become a clitic word (*taga*, with variant *haga*), and more specifically a stressless postposition,

[15]The reconstruction of the root for this word is somewhat controversial, and only the stem suffix is at issue here, so no attempt is made to give a complete reconstruction.

[16]The *-os/-es ending in these languages may itself be a late PIE replacement for an earlier simple *-s ending, based on such forms as the Old Irish genitive singular *anmae* 'of a name', where the ending is from *-men-s (so Thurneysen 1970: 60); hence the specification "Pre-Greek" is used here for the ending since it may not be the oldest form of this inflectional ending with this noun in PIE.

[17]A *-t-* extension is found with several other nominal stem classes in Greek, for instance, the neuter *-as*-stems, but it is not found with all members of the class and a few specific nouns, e.g. *kréas* 'meat' show it earliest in the genitive singular (4th century BC), with spread to other case-forms coming much later. Even with a noun like *ónoma* which, as noted below, shows the extension of the *-t-* into other case forms, early (Homeric) Greek shows shows no (metrical) trace of the *-t-* in the dative plural (see Chantraine 1973:74-75, 82-83).

[18]See Thomason & Kaufman (1988: 242-243) for some discussion of the substratum hypothesis, though Stang (1966: 228-9) argues against this view.

[19]That this one-time postposition has become a true case ending in Oscan is shown by its appearance on an adjective, in apparent agreement with the noun it modifies; see Buck (1928: 114) for this interpretation.

while in the Enontekiö dialect, it has progressed further to become a nonclitic adverb *taga*.[20]

As the Turkish example suggests, in Lithuanian and Oscan, there most likely was a period of synchronic variation between alternates before the ultimate generalization of a new case-form.[21] There can also be variation of a cross-linguistic sort here, in the sense that what is ostensibly the same development, with a postposition becoming a bound element on a nominal, might not lead to a new case-form, if the overall "cut" of the language does not permit the analysis of the new form as a case-marked nominal. For instance, the special first and second person singular pronominal forms in Spanish, respectively, *migo* and *tigo*, that occur with the preposition *con* 'with' and which derive from Latin combinations of a pronoun with an enclitic postposition, e.g. *mē-cum* 'me-with', could be analyzed as oblique case-marked pronouns. However, they are probably are not to be analyzed in that way, since there is no other evidence for such case-marking in the language, neither with pronouns other than these nor with nouns; one could just as easily, for instance, treat the element *-go* as part of a(n admittedly restricted) bipartitite discontinuous "circumposition" *con...-go*.[22]

As the examples involving the creation of new case forms shows, inflectional categories, e.g. ALLATIVE in Old Lithuanian, can be added to a language. Indeed, a typical change involving categories is the addition of a whole new category and the exponents of that category, though sometimes the addition is actually more a renewal of a previously existing category. Loss of categories, though, also occurs. For instance, historical documentation reveals clearly that the dual was present as an inflectional category in the verbal, nominal, and pronominal systems of early Greek (cf. the Ancient Greek ending *-methon* mentioned above in note 6), yet there are no traces of the dual in any system in Modern Greek; similarly, a dual category is assumed for the Proto-Germanic verb based on its occurrence in Gothic and is attested for the personal pronouns of earlier stages of the Germanic languages (e.g. Old English *ic* 'I' / *wē* 'we/PL' /*wit* 'we/DU'), yet such pronominal forms are not found in any of the modern Germanic languages, and verbal dual forms occur nowhere else among the older, nor indeed the more recent, Germanic languages. Thus as an inflectional category, one for which paradigmatic forms exist or might be expected to exist, dual number is no longer present in Greek or Germanic. Similarly, there was a loss of a synthetic perfect tense between Ancient Greek and late Koine Greek, so that Ancient forms such as *léluka* 'I have untied' became obsolete relatively early on in

[20]See Joseph & Janda (1988) for discussion of the issue of directionality with such changes.

[21]Compare also the situation with morphophonemic voicing in English plurals, discussed above (and see footnote 9), and note the on-going variation in the marking of past participles in English, with older *-(e)n* in some verbs giving way to the wider-spread *-ed* (as in *sewn / sewed*, *shown / showed*, *proven / proved*, etc.).

[22]The Spanish example suggests that changes in case-marking systems are not restricted to the distant past, though the failure of *-go* to spread to other pronouns (indeed, it has retreated somewhat from wider use in older stages of the language) or to use with other prepositions argues that it is not really a case-marking device. Similarly, the innovative use in certain varieties of written English of *inwhich*, as in *Shopping is a task* ***inwhich*** *one should enjoy*, has led some researchers, e.g. Smith 1981, and Riley & Parker 1986, to analyze it as a new case form of the relative pronoun, though Montgomery & Bailey 1991, in an extensive study of the use of the form, argue persuasively against that interpretation. Nonetheless, such examples provide the opportunity to witness the fate of case-like forms that occur in a restricted domain of the grammar, and thus provide some insights into the general processes by which such forms arise and take hold in a language.

the Post-Classical period; compare the merging of perfect and simple past tense for some speakers of Modern English, for whom *Did you eat yet?* is as acceptable as *Have you eaten yet?*. Actually, though, the reconstitution (and thus addition) of the category "perfect" occurred in the Medieval Greek period through the development of a periphrastic (analytic) perfect tense with 'have' as an auxiliary verb out of an earlier 'have' future/conditional tense.[23]

In the case of the Greek perfect, the Medieval innovation led to what was a new category, for there had been a period of several centuries in Post-Classical times when there was no distinct perfect tense. In some instances, though, it not so much the creation of a new category but rather the renewal of the category through new morphological expression. The future in Greek provides a good example, for throughout its history Greek has had a distinct future tense, contrasting formally and functionally with a present tense and a past tense, but the expression of the future has been quite different at different stages: the synthetic, suffixal, monolectic future in Ancient Greek (e.g. *grápso* 'I will write') gave way in Post-Classical times to a variety of periphrastic futures with infinitives plus auxiliary verbs, first with 'have', later with 'want' (e.g. *thélō grápsein*, literally "I-want to-write"), in which the parts maintained some independence (e.g. they could be separated by adverbs or inverted), but which in turn have ultimately yielded a new synthetic, monolectic future formed with a bound inseparable prefixed marker (in Standard Modern Greek, *θa*, as in *θa yrápso* 'I will write').[24]

There can be change as well in the content of a category, which, while in a sense a semantic shift, nonetheless can have morphological consequences, in that the category comes to be realized on elements not originally in its domain. For instance, the Slavic languages have developed a subcategory of "animacy" within the set of nominal gender distinctions, marked formally by the use of genitive forms where accusatives occur for inanimates; in early stages of Slavic (as represented, for example, by the earliest layer of Old Church Slavonic), only certain types of male humans (e.g. adults or freemen as opposed to children or slaves) participated in such "animacy" marking, while later on, a wider range of nouns came to belong to this subcategory (e.g., in Russian, nouns for females show the animate declensional characteristic in the plural, and in Serbo-Croatian, an animal noun such as *lava* 'lion' follows the animate pattern).[25]

Similar to change in the content of a category is the possibility of change in function/value of a morpheme: morphology involves the pairing of form with meaning, so it is

[23]Most likely, the path of development was through the conditional tense (past tense of the future) shifting first to a pluperfect (compare the fluctuation in Modern English between a pluperfect form and what is formally a past tense of the future utilizing the modal *would* in *if*-clauses, e.g. *If I had only known = If I would have known*), from which a present perfect, and other perfect formations could have developed. See Joseph (1983:62-64, 1995), for some discussion.

[24]The exact path from *thélō grápsein* to *θa yrápso* is a bit convoluted and indirect; see Joseph (1983:64-67, 1990:Ch. 5) for discussion and further details. The only material that can intervene between *θa* and the verb in Modern Greek is other bound elements, in particular the weak object pronouns.

[25]Even in Old Church Slavonic, there was some variability in category membership, and nouns for 'slave', 'child', various animals, etc. showed some fluctuation between animate and nonanimate inflection; see Lunt (1974: 46), and Meillet (1897) for some discussion. The descriptions in Comrie & Corbett (1993) provide a useful overview of the realization of animacy throughout the various Slavic languages. Thomason & Kaufman (1988: 249-250) suggest that this category may have developed through a Uralic substratum shifting to Slavic.

BEST COPY AVAILABLE

appropriate to note here as well instances in which there is change in the function of a morpheme, even though that might also be better treated under the rubric of semantic change. For instance, the development of the German plural marker *-er* discussed above clearly involves a reassignment of the function of the suffix *-iz- (→ *-er*) from being a derivational suffix serving to create a particular stem-class of nouns to being an inflectional marker of plural number. So also, the polarization of *was/were* allomorphy in some dialects of English to correlate with a positive/negative distinction, so that *were* is more likely to occur with *-n't* than is *was* (Trudgill 1990, Estes 1993, Schilling-Estes & Wolfram 1994), shows a reinterpretation of allomorphy that once signaled singular versus plural (or indicative versus subjunctive).

The changes illustrated so far have been fairly concrete, in that they concern the phonological realization of morphological categories or the categories themselves (which need some realization). There can also be change of a more abstract type, and a particularly fruitful area to examine is the matter of lexical relations. The components of grammar concerned with morphology, whether a separate morphological component or the lexicon, reflect the relationships that exist among forms of a language, whether through lexical "linking" rules, lexical redundancy rules, or common underlying forms. Significant changes can occur in the salience of certain relations, to the point where forms that were clearly related at an earlier stage of the language are just as clearly perceived by speakers at a later stage not to be related. Etymological dictionaries[26] provide dozens of examples involving separate lexical items that have lost any trace of a connection except for those speakers who have secondarily acquired knowledge of the relationship, e.g. *two* and *twine*, originally a 'double thread' (both from the earlier root for 'two'), or *yellow* and *gall* (both originally from a root for 'shine', but with different original vocalism and different suffixal formations)[27], to name just a few such sets from English. This situation frequently arises with words that are transparent compounds at one stage but lose their obvious composition. For instance, the modern English word ***sheriff*** derives from an Old English compound *scīrgerēfa*, literally the "reeve" (*gerēfa*) of the "shire" (*scīr*), but is not obviously connected in any way with Modern English ***shire*** or ***reeve***; nor is *lord* plausibly connected synchronically with *loaf* or *ward*, the modern continuations of its Old English components (*hlāford*, literally "bread-guardian", from *hlāf* 'bread' plus *weard* 'guardian'). In these cases, both sound changes, which can obscure the once-obvious relationship, as with *l(-ord)* and *loaf*, and semantic changes, as with *(l-)ord* and *ward* (the latter no longer meaning 'guardian'), can play a role in separating once-synchronically related lexical items.[28] And, borderline cases provide some difficulties of analysis; for instance, are the semantically still-compatible words *two* and *twelve* to be synchronically related in Modern English, and if so, does *two* derive from a form with an underlying cluster /tw-/? To a certain degree, the answers to such questions will depend on meta-theoretical concerns, such as a decision on the degree of abstractness to be allowed in morphophonological analyses (on which, see below).

---

[26]For English, the *American Heritage Dictionary of the English Language* (3rd edition, 1992), with its "Indo-European Roots Appendix" by Calvert Watkins, is an excellent example of such a resource.

[27]*yellow* is from Old English *geolu*, from Proto-Germanic *gelwaz; *gall* is from Old English *gealla*, from Proto-Germanic *gallōn-.

[28]Note also that words that are etymologically unrelated can come to be perceived by speakers at a later stage as related, perhaps even merged into different meanings of the same word. For instance, the body-part *ear* and *ear* as a designation of a piece of corn, are etymologically distinct (the former from Proto-Indo-European *ous- 'ear', the latter from *ak- 'sharp'), but are felt by many speakers to be different meanings of one polysemous lexical item.

In the face of such examples of change, it is equally important to reflect on what does not or cannot change in the morphology. To the extent that there are well-established principles and constructs that are taken to be part of the basic theoretical framework for morphology, e.g. Lexical Integrity, Morphology-Free Syntax, disjunctive ordering for competing morphological rules, or the like, presumably these will not change; they are the theoretical building blocks of any account of the morphological component, and thus cannot change diachronically (though they can of course be altered by linguists in their descriptions/accounts if synchronic or diachronic facts make it clear, for instance, that syntax is not morphology-free, or the like).

Among these theoretical building blocks are some that have a significant impact on diachronic accounts of morphology, in particular those that allow for the determination of the borderlines between components of grammar. That is, it is widely recognized that there is interaction at least between morphology and phonology (witness the term "morphophonology", and the posibility of phonological constraints on morphological rules) and between morphology and syntax (witness the term "morphosyntax"). Thus it becomes appropriate to ask how to tell when some phenomenon crosses the border from "pure" phonology into "morphology", or vice-versa, or from "pure" syntax into "morphology"; although there is a purely synchronic question here of how to characterize a given phenomenon in a given language for a given period of time, the matter of crossing component boundaries is also a diachronic issue. If a once-phonological phenomenon comes to be completely morphologically conditioned, and is considered to be part of the morphological component and not the phonological component, then there has been a change in the grammar of the language with regard to that phenomenon; the surface realization of the forms may not change, but the grammatical apparatus underlying and producing or licensing those surface forms has changed. Thus when the vowel-fronting induced by a following high vowel (so-called "umlaut") in early German came in later stages of the language, when the phonetic motivation for the fronting was obscured or absent on the surface, to be an effect associated with the addition of certain suffixes (e.g. the diminutive *-chen*, the noun plural *-e*, etc.) or with the expression of certain categories (e.g. plural of certain nouns which take no overt suffix, such as *Bruder* 'brother', with plural *Brüder*), one interpretation is that the umlauting process is no longer phonological in nature but rather is a morphological process invoked by certain morphological categories.[29] Similarly, at a stage in which the expression of allatives in (pre-)Lithuanian was accomplished by a noun plus a postposition, syntactic rules that license postpositional phrases were responsible for the surface forms; when the noun fused with the postpostional element to such an extent that a virtual new case-marker was created, the responsibility for the ultimate expression of the allative would have moved out of the realm of syntax and into the morphological component.

These examples and the relevance of theoretical decisions separating components of grammar point to the need to recognize the impact that the theory of grammar one adopts has on diachronic analyses. For example, permitting a degree of abstractness in phonological analyses can often allow for a description that is purely phonological rather than morphological in nature. Umlaut in German, for instance, could still be considered to be purely phonological, if each suffix or category now associated with umlaut of a stem were represented underlyingly with a high front vowel to act as the triggering segment; deleting that segment before it could surface would have to be considered to be allowable abstraction.

[29]See Janda (1982, 1983) for a thorough discussion of the relevant facts supporting this analysis of German umlaut. The productivity of umlaut does not in itself argue for it being phonological still, in that sense, the German situation is now similar in nature, though not in scope, to the very limited umlaut effects present still in English, e.g. in a few irregular plurals (*man/men*, *foot/feet*, etc.) and verbal derivatives (*drink/drench*, etc.).

Similarly, the palatalizations of stem-final velars in various Slavic languages that accompany the attachment of certain suffixes (e.g. Russian adjectival *-nyj*, as in *vostoč-nyj* 'eastern' from the noun *vostok* '(the) east') were once triggered by a suffix-initial short high front vowel (the "front jer") that ultimately was lost in most positions in all the languages; thus a synchronic purely phonological analysis could be constructed simply by positing an abstract front jer that triggers the palatalization and is then deleted.[30]

2. Where does morphology come from?

The examples in section 1 show that the primary source of morphology is material that is already present in the language, through the mediation of processes of resegmentation and reinterpretation applied in a variety of ways, as well as by other processes of change, e.g. sound changes, that lead to grammaticalization. In addition, morphology may enter a language through various forms of language contact.

Thus examples of blending or contamination involve preexisting material, as in the case of Greek 1DUAL.MEDIOPASSIVE ending (see note 6), where a "crossing" of the 1PL.MEDIOPASSIVE ending *-metha* with the 2DUAL.MEDIOPASSIVE ending *-sthon* yielded *-methon*. In a parallel fashion, when a sequence of elements is resegmented, i.e. given a different "parsing" by speakers from what it previously or originally had, material already in the language is given a new life. The English *-ness* suffix, for instance, derives from a resegmentation of a Germanic abstract noun suffix *-assu- attached to *n*-stem adjectives, with subsequent spread to different stem-types; thus *ebn-assu- 'equality' (stem: *ebn- 'even, equal') was treated as if it were *eb-nassu-, and from there *-nassu- could spread, as in Old English *ehtness* 'persecution' (from the verb *eht-an* 'to pursue') or *gōdness* 'goodness' (from the adjective *gōd*). The extreme productivity of this new suffix in Modern English, being able to be added to virtually any new adjective (e.g. *gauche-ness*, *uptight-ness*, etc.) shows how far beyond its original locus a form can go, and also how the productivity of a morpheme can change, since *-ness* originally had a more limited use.

Other types of reanalysis similarly draw on material present at one stage of a language in one form and transform it at a later stage. In many cases of desyntacticization, for instance, where once-syntactic phrases are reinterpreted as word-level units with affixes that derive from original free words or clitics, as in the Oscan locative or Lithuanian allative discussed above, the same segmental material is involved, but with a different grammatical status. Sometimes, though, such reanalyses are accompanied (or even triggered) by phonological reductions, so that the result is just added segmental material with no clear morphological value; the *-t* of Old English *wit* 'we two', for instance, comes from a phonologically regular reduction of the stem for 'two' in an unstressed position, that is from *we-dwo, and similar cases involving old compounds, e.g. *sheriff* and *lord*, were noted above. Moreover, when sound changes obscure the conditioning factors for a phonologically-induced effect, and a new morphological process arises, as with umlaut in German, again what has occurred is the reanalysis of already existing material, in this case the fronting of a stem vowel that accompanies the addition of an affix; the new process is

[30]Thus there is an important interaction with sound change to note here, for sound change can obscure or remove the conditioning elements for a phonological process, thereby rendering the process opaque from a phonological standpoint and making it more amenable to a morphologically-based analysis. Recall also that sound change can play a role in the reduction of compounds to monomorphemic words and of phrasal units, such as noun plus postposition, to monolexemic expressions.

then available to spread into new contexts, having been freed from a connection to a particular phonological trigger.

Sometimes semantic shifts are involved in such reanalyses. The well-known example of the new suffix *-gate* in English is a case in point. This suffix originated from the phrase *Watergate affair* (or *scandal* or the like), referring to the events in the aftermath of a burglary at the Watergate apartment complex that brought down the Nixon administration in the early 1970s, through a truncation of the phrase to *Watergate* (e.g. *Nixon resigned because of Watergate*) and a reanalysis in which the *-gate* part was treated as a suffix and not the compound-member it originally was in the place-name *Watergate*. It then spread, giving coinages such as *Irangate* (for a scandal in the 1980s involving selling arms to Iran), *Goobergate* (for a scandal alleged in 1979 to have involved then-President Carter's peanut warehouse), and numerous others.[31] What is especially interesting about this reanalysis is that in the process of *-gate* becoming a suffix, there was a shift in its meaning, so that in *X-gate*, the suffix *-gate* (but not the free word *gate*) itself came to mean 'a scandal involving X', an abbreviation, as it were, for 'a scandal involving X reminiscent of the Watergate scandal'.

Other processes similar to these that create pieces of words produce as well new lexical items and thus contribute to the morphological component, to the extent that it includes the lexicon. Without going into great detail, one can note active processes of word-formation such as compounding, acronymic coinage (e.g. *cpu* (pronounced [sipiyu]) for *central processing unit*, *ram* ([ræm]) for *random-access memory*, *rom* ([ram]) for *read-only memory*, etc.), clipping (e.g. *dis* from *(show) disrespect*, *rad* from *radical*, *prep* from *prepare* and from *preparatory*, *vet* from *veteran* and from *veterinarian*, etc.), lexical blends (e.g. *brunch* from *breakfast* crossed with *lunch*, etc.), phrasal truncations (such as the source of the word *street* via a truncation, with a semantic shift, of Latin *via strāta* 'road (that has been) paved' to simply *strāta*), and so on. It is worth noting here that whereas virtually any piece of a word can be "elevated" to status as a free word via clipping, even suffixes, inflectional morphemes seem to be resistant to such an "upgrading"; thus although *ism* as a free word meaning 'distinctive doctrine, system, or theory' (*AHD* 1992, s.v.) has been extracted out of *communism*, *socialism*, etc., instances in which suffixes like *-ed* or *-s* become words for 'past' or 'many' or the like appear not to exist.

One final language-internal path for the development of morphology involves instances in which the conditions for an analysis motivating a sequence of sounds as a morpheme arise only somewhat accidentally. In particular, if a situation occurs in which speakers can recognize a relation among words, then whatever shared material there is among these words can be elevated to morphemic status. This process is especially evident with phonesthemes, material that shows vague associative meanings that are often sensory based, such as the initial sequence *gl-* in English for 'brightly visible', as in *gleam*, *glitter*, *glisten*, *glow*, and the like. Some linguists are hesitant to call these elements morphemes, and terms like quasi-morpheme, sub-morphemic unit, and others have been used on occasion, even though by most definitions, they fulfill the criteria for being full morphemes. Leaving aside the synchronic issue they pose for analysis, it is clear that they can come to have some systematic status in a grammar, for they can spread and be exploited in new words (e.g. *glitzy*, which, whether based on German *glitzern* 'to glitter' or a blend involving *ritzy*, nonetheless fits into the group of other "bright" *gl-* words). A good example of this process is afforded by the accumulation of words in English that end in *-ag* (earlier [-ag], now [-æg]) and have a general meaning referring to 'slow, tired, or tedious action',

[31] Many such *-gate* forms are documented in notes in *American Speech*, see Joseph 1992 for references.

37

BEST COPY AVAILABLE

specifically *drag* 'lag behind', *fag* 'grow weary', *flag* 'droop', and *lag* 'straggle', all attested in Middle English but of various sources (some Scandinavian borrowings, some inherited from earlier stages of English); once there were four words with a similar meaning and a similar form had entered the language by the 13th or so century, an analysis was possible of this *-ag* as a (sub-)morphemic element. That it had some reality as such a unit is shown by the fact that these words "attracted" a semantically related word with a different form into their "orbit" with a concomitant change in its form; *sag* 'sink, droop' in an early form (16th century) ended in *-k*, yet a perceived association with *drag/fag/flag/lag* and the availability of *-ag* as a marker of that group brought it more in line with the other members, giving ultimately *sag*.

The example of *-gate* above also shows language contact as a source of new morphology in a language, for it has spread as a borrowed derivational suffix into languages other than English; Schuhmacher 1989 has noted its presence in German, Kontra 1992 gives several instances of *-gate* from Hungarian, and Joseph 1992 provides Greek and Serbo-Croatian examples. Numerous examples of borrowed derivational morphology are to be found in the Latinate vocabulary in English, but it should be noted also that inflectional morphology can be borrowed. Various foreign plurals in English, such as *criteria, schemata, alumnae*, etc., illustrate this point, as do the occurrence of Turkish plural endings in some (now often obsolete) words in Albanian of Turkish origin, e.g. *at-llarë* 'fathers', *bej-lerë* 'landlords' etc. (Newmark et al. 1982:143), and the verb paradigms in the Aleut dialect spoken on the island of Mednyj, which show Russian person/number endings added onto native stems, e.g. *uŋučí-ju* 'I sit' / *uŋučí-it* '(s)he sits', etc. (Thomason & Kaufman 1988:233-238).[32] Although it is widely believed that inflectional morphology is particularly resistant to borrowing and to being affected by language contact, Thomason & Kaufman 1988 have shown that what is crucial is the social context in which the contact and borrowing occurs. Thus the intense contact and the degree of bilingualism needed to effect contact-induced change involving inflectional morphology simply happen not to arise very often, so that any rarity of such change is not a linguistic question *per se*. Moreover, the spread of derivational morphology across languages may actually take place through the spread of whole words, which are then "parsed" in the borrowing language; the *-gate* suffix in Greek, for instance, occurred first in labels for scandals that followed the English names directly (e.g. "Irangate") before being used for Greek-internal scandals.

3. What triggers change in the morphology?

Historical linguists tend to divide causes of change into those internal to the linguistic system itself and those that are external, i.e. due to language contact. The discussion in section 2 shows that language contact indeed is one potential cause of morphological change, and under the right social conditions for the contact, virtually any morphological element (inflectional, derivational, bound, free, whatever) can be transferred from one language to another. Examining contact-induced morphological change then becomes more a matter — an important one to be sure — of cataloguing the changes and determining the

[32]Of course, some of these English forms are susceptible, seemingly more so than native plurals, to reanalysis as singular; *criteria* is quite frequently used as a singular, and a plural *criterias* can be heard as well. Similarly, the Albanian plurals in *-llarë/-lerë* show the native plural suffix *-ë* added to the Turkish *-lar/ler* ending, somewhat parallel to forms like *criterias*.

sociolinguistic milieu in which the contact occurs.[33] There is far more to say, however, about internal forces triggering change in the morphology.

From a consideration of the examples above, it emerges that much of morphological change involves "analogy", understood in a broad sense to take in any change due to the influence of one form over another.[34] This process is most evident in blending or contamination, where there is mutual influence, with a part of one form and a part of another combining, but it extends to other types of morphological change as well.

For instance, the spread of *-t-* described above in the stem of Greek neuter nouns in *-ma* involved the influence of the genitive singular forms, the original locus of the *-t-*, over other forms within the paradigm. Such paradigm-internal analogy, often referred to as "levelling", is quite a common phenomenon. An interesting example, to be reexamined below from a different perspective, involves the reintroduction of *-w-* into the nominative of the adjective for 'small' in Latin: in early Latin, the adjective had nominative singular *parw-os* and genitive *parw-ī* , and paradigmatic allomorphy *par-os* versus *parw-ī* resulted when a sound change eliminated *-w-* before a round vowel; paradigm-internal analogical pressures led to the restoration of the *-w-*, giving ultimately the Classical Latin forms *parvus / parvī* .

Analogical influence among forms is not restricted to those that are paradigmatically related. Two elements that mark the same category but with different selectional properties can exert analogical pressures, leading to the spread of one at the expense of another. Examples of such analogies include cases across form-classes where the elements involved are different morphemes, as with the spread of the *-s* plural in English at the expense of the *-(e)n* plural, discussed in section 1, as well as cases where one conditioned allomorphic variant extends its domain over another, thereby destroying the once-conditioned alternation, as with the spread of the Greek 2SG MEDIOPASSIVE ending *-sai*, also discussed above.

Similarly, in cases of "folk etymology", speakers reshape a word based on other forms that provide what they see as a semantically (somewhat) motivated "parsing" for it; for example *tofu* for some speakers is [tofud] as if a compound with *food*, and *crayfish*, first borrowed from French in the 14th century as *crevise*, was remade as if containing the lexeme *fish*. In such cases, which are quite common with borrowings or words that are unfamiliar for reasons such as obsolescence, there is influence from one form being brought to bear on the shape of another. More generally, many cases of reanalysis/reinterpretation involve some analogical pressures, especially when the reanalysis is induced by models that exist elsewhere in the language; for instance, when Middle English *pease*, a singular noun meaning 'pea', was reanalyzed as a plural, allowing for the creation (by a process known as "backformation") of a singular *pea*, the influence of other plurals of the shape [...V-z] played a role.

Thus there is a cognitive dimension to (certain types of) morphological change, in the sense that it often involves speakers actively making connections among linguistic forms

[33]The distinction drawn by Thomason & Kaufman 1988 between borrowing and language shift is a crucial one, with the latter situation being the contact vehicle for some of the more "exotic" morphological changes. Their discussion is perhaps the most complete enumeration of the wide range of possible contact-induced changes, including those affecting the morphology. See also footnote 23 above concerning a language-shift source for the introduction of the new animacy subcategory in Slavic.

[34]See Anttila 1977 and Anttila & Brewer 1977 for basic discussion and bibliography on analogy in language change.

and actively reshaping their mental representations of forms.[35] Indeed, analogy as a general mode of thinking and reasoning has long been treated within the field of psychology, and work by Esper[36] was an early attempt to study the psychological basis for analogical change in language.[37] More recently, analogical change has been viewed from the perspective of a theory of signs; Anttila (1972), for instance, has argued that the semiotic principle of "one form to one meaning" drives most of analogical change in that levellings, form-class analogies, folk etymology, and the like all create a better fit between form and meaning, while proponents of Natural Morphology similarly work with the importance of degrees of iconicity in the form-meaning relationship and, for example, evaluate changes in the marking of inflectional categories or derivational relationships in terms of how they lead to a better fit with universal iconic principles.[38] Even the process of grammaticalization has been given a cognitive interpretation; Heine, Claudi, & Hünnemeyer (1991: 150), for instance, have argued that "underlying grammaticalization there is a specific cognitive principle called the 'principle of the exploitation of old means for novel functions' by Werner and Kaplan (1963:403)" and they note that in many cases, grammaticalization involves metaphorical extension from one cognitive domain, e.g. spatial relations, to another, e.g. temporal relations (as with *behind* in English).[39]

Moving away from these more cognitive, functional, and/or mentalistic views of what causes morphological change, one can take the generative approach to analogy in which it is nothing more than changes in the rule system that generates a given paradigm. The Latin case mentioned above whereby a paradigm of *parw-os /parw-ī* ,yielded *par-os /parw-ī* by sound change and finally *parvus / parvī* by paradigm levelling could be seen as the addition of a rule of *w* → Ø before front vowels (the sound change) operating on an underlying form for the nominative with the *-w-*, and then the loss of that rule giving the underlying stem-final *-w-* a chance to surface once again. What is left unexplained in such an account is why the rule would be lost at all; early generative accounts (e.g. King 1969, Kiparsky 1968) simply gave a higher value to a grammar with fewer rules or features in the rules (but then why would a rule be added in the first place?), or unnatural rule orderings, whereas later accounts (especially Kiparsky 1971) gave higher value to grammars that generated

---

[35]Analogy can also provide direct evidence for the existence of the tight relations among members of clusters of forms that allow for an inference of a (psychologically) real category. For instance, the fact that *drag/fag/flag/lag* could affect [sæk] and draw it into their "orbit" as *sag* is *prima facie* evidence of the strength of the connections among these four words. Similarly, the dialectal extension of the *-th* nominalizing suffix, which shows limited productivity within the domain of dimension adjectives (cf. *wide/width, deep/depth*, etc.) to *high*, giving [hayθ] (thus with some contamination from *height*) can be seen as evidence of the subcategory within which the suffix is productive.

[36]See, for example, Esper 1925, but also the posthumous Esper 1973.

[37]See also the recent work by Skousen in which an explicit and formal definition of analogy is used to create a predictive model of language structure; among the tests for this approach, in Skousen (1989: Ch. 5), is its application to historical drift in the formation of the Finnish past tense.

[38]Especially the work by Wolfgang Dressler, Willi Mayerthaler, Wolfgang Wurzel, and others; see for instance Dressler et al. 1987, Mayerthaler 1981, Wurzel 1984. See also Shapiro 1990 (with references) where a somewhat different view of the role of semiotics in language change, as applied to morphophonemics, is to be found.

[39]Of course, not all grammaticalization involves morphological change, except insofar as it affects lexical items. The papers in Traugott & Heine 1991 contain numerous references to the cognitive dimension of grammaticalization; see also Hopper & Traugott 1993 for discussion and references.

paradigm-internal regularity, a condition that tacitly admits that the traditional reliance on the influence of related surface forms had some validity after all. Another type of generative reinterpretation of analogy is that given by Anderson 1988, who, as observed in footnotes 8 and 10, sees "analogies" such as the spread of the English *-s* plural or the loss of morphophonemic voicing in certain English plurals as being actually changes in the lexically idiosyncratic specifications for the inflectional markings, derivational processes, and the like selected by particular lexical items.

Finally, any discussion of causes must make reference to the fact that as is the case with all types of language change, the spread of morphological innovations is subject to social factors governing the evaluation of an innovation by speakers and its adoption by them. Indeed, if one takes the view that true language change occurs only when an innovation has spread throughout a speech community, then the various processes described here only give a starting point for a morphological innovation, but do not describe ultimate morphological change in the languages in question.[40] The presence of synchronic variation in some of the changes discussed above, as with the loss of morphophonemic voicing in English plurals, shows how the opportunity can arise for nonlinguistic factors to play a role in promoting or quashing an innovation.

4. Is a general theory of morphological change possible?

Over the years, there have been numerous attempts at developing a general theory of morphological change, and the approaches to the causes of morphological change outlined in the previous section actually represent some such attempts. To a greater or lesser extent, there have been successes in this regard. For instance, the recognition of a cognitive dimension to analogy and to grammaticalization has been significant, as has the corresponding understanding of the role of iconicity. The generative paradigm has been embraced by many, but a few further comments about it are in order.

Most important, as noted above, an account of analogical change in paradigms that is based on changes in the rules by which the paradigms are generated does not extend well to analogical changes that cannot involve any rules, such as blends or contamination. A development such as Middle English *femelle* (a loan word from French) becoming *female* by contamination with *male* does not involve any generative rules, yet it still took place and one would be hard-pressed to account for the change in the vocalism of this word without some reference to pressure from the semantically related *male*. Similarly, the change of the nominative singular of the uniquely inflected word for 'month' in the Elean dialect of Ancient Greek, giving *meús* (with genitive *mén-ós*, versus, e.g., Attic nominative *mḗ(s)*, based on the uniquely inflected word for the god Zeus (nominative *Zeús*, genitive *Zḗn-ós*) could not involve any generative phonological rules since both words were the only members of their respective declensional classes and thus probably listed in the lexicon rather than rule-governed in terms of their inflection.[41] On the other hand, the semiotic and

[40]This view has long been associated with William Labov and is expressed most recently in Labov (1994: 45): "In line with the general approach to language as a property of the speech community, I would prefer to avoid a focus on the individual, since the language has not in effect changed unless the change is accepted as part of the language by other speakers".

[41]One could say of course that there has been a change in the morphological rules that introduce the stem variants for 'month', but that still brings one no closer to understanding why the change occurred. Once 'Zeus' and 'month' share the same patterns of alternation, then a generalization over these two forms is

41
BEST COPY AVAILABLE

cognitive views of analogy, for instance invoking a one-form-to-one-meaning principle, can provide a motivation not only for the putative cases of analogy as rule-change but also for those that could not involve rule change.[42] Moreover, cases of bi-directional levelling, as presented by Tiersma 1978 with data from Frisian, in which some paradigms involving a particular phonological rule are "levelled" as if the rule had been lost, while others involving the same rule are "levelled" as if the rule had been generalized, make it difficult to give any predictive value to a rule-based approach to analogy.[43] Finally, the recognition of paradigm uniformity as a part of the evaluation metric in Kiparsky 1971 is tantamount to recognizing analogy in its traditional sense. As Anttila (1972: 129, 131) puts it: "What rule changes always describe, then, is the before-after relationship. They give a mechanism for description, not a historical explanation [...] Rule change is not a primary change mechanism, but an effect".

This is not to say, however, that traditional analogy is not without some problems. As has frequently been pointed out, it often seems unconstrained, and there is an element of unpredictability with it: When will analogy occur? What direction will levelling take? Which forms will serve as models? etc. In part to address this uncertainty about the workings of analogy, some scholars have attempted to formulate a set of general tendencies or regularities governing analogy. The two most widely discussed schemes are those of Kurylowicz (1945-9) and Mańczak (1958).[44] A full discussion of these proposals is beyond the scope of this paper, but it is generally held that Kurylowicz's "laws" are, as Collinge (1985: 252) citing Anttila (1977: 76-80) puts it, more "qualitative and formal" in nature whereas Mańczak's tendencies are more "quantitative and probabilistic".[45] It can be noted also that some of their specific proposals complement one another, some are contradictory, some are tautologous and thus of little value, but some, e.g. Mańczak's second tendency ("root alternation is more often abolished than introduced") and Kurylowicz's first "law" ("a bipartite marker tends to replace an isofunctional morpheme consisting of only one of these elements") are valuable tools in analyzing analogical changes, as they represent reflections of tensions present in language in general, respectively the need to have redundancy for clarity and the desire to eliminate unnecessary or unmotivated redundancy.[46] Moreover, Kurylowicz's fourth "law" has, in the estimation of Hock (1991: 230), proven to be "a very reliable guide to historical linguistic research". This "law", which states that an

---

possible, allowing for some simplification in the grammar. However, the change cannot have occurred just to simplify the morphological rules for 'Zeus' somewhat by giving them wider applicability, since a greater simplification would have arisen had the stem-alternation for this noun been eliminated altogether (as it was in some dialects that innovated a nominative *Zēn*).

[42]Thus *female* makes more "sense", and thus is a better fit between form and meaning, when formally paired with its antonym *male*, similarly, providing a "partner" for the unique stem-alternations of 'Zeus' makes the *Zeu- / Zēn-* alternation less irregular, and thus more motivated and easier to deal with from a cognitive standpoint.

[43]Similarly, note forms such as *dwarves* in English, mentioned above in footnote 10, that run counter to the general levelling out of stem differences due to voicing of fricatives in the plural.

[44]See Winters 1995 for an English translation, with some commentary of this important oft-cited yet generally little-read paper.

[45]See Vincent 1974, Collinge (1985: 249-253), Hock (1991: Chapter 10), and Winters 1995 for more detailed discussion and comparison of the two schemes.

[46]The statements of these principles and their comparison are taken from Hock (1991: Chapter 10).

innovative form takes on the primary function and the older form it replaces, if it remains at all, does so only in a secondary function, can be exemplified by the oft-cited caseof English *brethren*, originally a plural of the kinship term *brother*, but now relegated to a restricted function in the meaning "fellow members of a church".[47]

Other general tendencies of morphological change have been proposed and have proven quite useful. For instance, there is the observation by Watkins 1962 that third person forms are the major "pivot" upon which new paradigms are constituted.[48] However, as with other proposed principles, "Watkins' Law" is also just a tendency; the change of the 3PL past ending in Modern Greek to *-ondustan* discussed in section 1, which shows the effects of pressure from 1PL and 2PL endings on the 3PL, might constitute a counterexample, for instance.

In the end, it must be admitted that much of morphological change involves lexically particular developments, and it is significant that even the spread of analogical changes seems to be tied to particular lexical items; thus unlike sound change, which generally shows regularity in that it applies equally to all candidates for the change that show the necessary phonetic environment, morphological change, especially analogical change, is sporadic in its propagation. Thus, as shown in section 1, even with the vast majority of nouns in English now showing an innovative *-s* plural, a few instances of the older *-(e)n* marker, in *oxen*, *children*, *brethren*, and proper names like *Schoonmaker*.

Therefore, it may well be that for morphological change, a general theory, that is, a predictive theory, is not even possible, and all that can be done is the cataloguing of tendencies, which, however valid they may be, do not in any sense constitute inviolable predictions about what types of changes will necessarily occur in a given situation. In that sense, accounts of morphological change are generally retrospective only, looking back over a change that has occurred and attempting to make sense of it.

5. Conclusion

Although morphological change in general shows much that is unpredictable, the examples provided herein give a good overall view of the types of changes that are likely to be encountered in the histories of the languages of the world, the causes underlying these changes, and the ways linguists have gone about explaining the observed changes.

One final observation on the extent of the domain of morphological change is in order. Much of morphological change, as described here, involves changes in lexical items — in their form, in their selectional properties, in their relations to other lexical items, and so on — and this is all the more so if inflectional affixes are listed in the lexicon instead of being introduced by morphological rules. It is generally accepted that at least certain types of sound changes involve lexeme-by-lexeme spread (the cases of so-called lexical diffusion, cf. Wang 1969 but especially Labov 1981, 1994) and it seems that in some instances, at least, the impetus for the spread of a pronunciation into new lexical items is essentially

[47] See Robertson 1975 for an example of the fourth law from Mayan.

[48] See Collinge (1985: 239-240) for discussion and references.

analogical in nature.[49] Also, there are many so-called irregular sound changes, e.g. metathesis or dissimilation, that apply only sporadically, and thus end up being lexically particular rather than phonologically general. Moreover, at least certain types of changes typically relegated to the study of syntactic change (for instance changes in agreement patterns, grammaticalization, movement from word to clitic to affix, reduction of once-bi-clausal structures to monoclausal, and the like—i.e. much of syntactic change other than word order change) ultimately involves morphology or at least "morphosyntax" in some way.[50] Thus it is possible to argue that much, perhaps most, of language change has a morphological/morpholexical basis, or at least has some morphological involvement. Such a view would then provide some diachronic justification for the importance of morphology in language in general and thus for a morphological component in the grammars of particular languages.[51]

---

[49]For example, a possible scenario for lexically diffuse spread of a sound change is the following: if lexical item X shows variation in pronunciation between X and X', and item Y has some of the same phonological features as item X, speakers might extend, analogically with X as the model, the variant pronunciation X' to Y, so that Y comes to show variation between Y and Y'. If the competition is ultimately resolved in favor of X' and Y', the sound change would have been generalized.

[50]See for example, DeLancey 1991, regarding such clause reduction in Modern Tibetan (discussed in Hopper & Traugott 1993: 198-201).

[51]In Joseph & Janda 1988, the claim is advanced that grammars are "morphocentric", and the prevalence noted above in section 1 of diachronic movement into morphology (from syntax and from phonology), as opposed to the relative rarity of movement out of morphology, is taken as diachronic evidence for the centrality of morphology. This claim is based on an assumption that facts from diachrony can have relevance to the construction and evaluation of synchronic grammars, and to the extent that it is valid, provides some support for treating such facts as important.

REFERENCES

AHD = The American Heritage dictionary of the English language. Third Edition. Boston: Houghton Mifflin Company.

Anderson, Stephen R. 1988. Morphological change. In Frederick J. Newmeyer, ed., Linguistics: the Cambridge survey. Volume I. Linguistic theory: foundations. 324-362. Cambridge: Cambridge University Press.

Anttila, Raimo. 1972. An introduction to historical and comparative linguistics. New York: MacMillan Publishing Co. (revised and expanded edition published 1988, Amsterdam: John Benjamins Publishing Co.).

Anttila, Raimo. 1977. Analogy. The Hague: Mouton.

Anttila, Raimo and Warren A. Brewer. 1977. Analogy: a basic bibliography (= Amsterdam Studies in the Theory and History of Linguistic Science, Series 5, vol. 1). Amsterdam: John Benjamins Publishing Co.

Bloomfield, Leonard. 1946. Algonquian. In Linguistic structures of native America (= The Viking Fund Publications in Anthropology 6). New York: The Viking Fund [reprinted 1971 by Johnson Reprint Corporation, New York].

Buck, Charles D. 1928. A grammar of Oscan and Umbrian. Boston: Ginn and Co.

Chantraine, Pierre. 1973. Morphologie historique du grec [2nd edition]. Paris: Éditions Klincksieck.

Collinge, N. E. 1985. The laws of Indo-European (= Benjamins Paperbacks 2). Amsterdam: John Benjamins Publishing Co.

Comrie, Bernard and Greville Corbett, eds. 1993. The Slavonic languages. London and New York: Routledge.

Dai, John. 1990. Historical morphologization of syntactic structures: evidence from derived verbs in Chinese. Diachronica 7.1.9-46.

DeLancey, Scott. 1991. The origins of verb serialization in Modern Tibetan. Studies in language 15.1-23.

Dressler, Wolfgang; Willi Mayerthaler; Oswald Panagl; and Wolfgang U. Wurzel. 1987. Leitmotifs in natural morphology. Amsterdam: John Benjamins Publishing Co.

Esper, Erwin A. 1925. A technique for the experimental investigation of associative interference in artificial linguistic material (= Language Monographs, 1). Philadelphia: Linguistic Society of America.

Esper, Erwin A. 1973. Analogy and association in linguistics and psychology. Athens: University of Georgia Press.

Estes, Natalie. 1993. Alternative regularization patterns for past-tense *be* in a semi-isolated eastern coastal community, paper presented at NWAVE 22 (Ottawa).

BEST COPY AVAILABLE

Heine, Bernd, Ulrike Claudi, and Friederike Hünnemeyer. 1991. From Cognition to grammar—evidence from African languages. In Traugott and Heine 1991, 149-187.

Hock, Hans Henrich. 1976. Review article on Anttila 1972. Language 52.202-220.

Hock, Hans Henrich. 1991. Principles of historical linguistics (second edition, revised and updated). Berlin: Mouton de Gruyter.

Hopper, Paul J. and Elizabeth Closs Traugott. 1993. Grammaticalization. Cambridge: Cambridge University Press.

Janda, Richard D. 1982. Of formal identity and rule-(un)collapsability: On lost and found generalizations in morphology, WCCFL 1.179-197.

Janda, Richard D. 1983. Two umlaut-heresies and their claim to orthodoxy. Coyote Papers (Working Papers in Linguistics, University of Arizona) 4.59-71.

Janda, Richard D. 1990. Frequency, markedness, and morphological Change: On Predicting the Spread of Noun-Plural *-s* in Modern High German—and West Germanic. ESCOL '90 (Proceedings of the Seventh Eastern States Conference on Linguistics), 136-153. Columbus: Department of Linguistics, The Ohio State University.

Joseph, Brian D. 1983. The synchrony and diachrony of the Balkan infinitive: a study in areal, general, and historical linguistics (= Cambridge studies in linguistics, supplementary volumes, 1). Cambridge: Cambridge University Press.

Joseph, Brian D. 1990. Morphology and universals in syntactic change: evidence from Medieval and Modern Greek (Outstanding Dissertations in Linguistics). New York: Garland Publishing Co. (expanded and updated version of 1978 Harvard University Ph. D. dissertation, printed and distributed by Indiana University Linguistics Club, 1978).

Joseph, Brian D. 1992. Yet more on *-gate* words: A Perspective from Greece, American Speech 67.2.222-223.

Joseph, Brian D. 1995. Textual authenticity: evidence from Medieval Greek. To appear in Susan Herring; Pieter van Reenen; and Lene Schoesler, eds., Textual Parameters in Ancient Languages. Amsterdam: John Benjamins Publishing Co.

Joseph, Brian D. and Richard D. Janda. 1988. The how and why of diachronic morpholgization and demorphologization. In Michael Hammond and Michael Noonan, eds., Theoretical morphology. Approaches in modern linguistics, 193-210. San Diego: Academic Press, Inc.

King, Robert. 1969. Historical linguistics and generative grammar. Englewood Cliffs, NJ: Prentice Hall.

Kiparsky, Paul. 1968. Linguistic universals and linguistic change. In Emmon Bach and Robert Harms, eds., Universals in linguistic theory, 170-202. New York: Holt, Rinehart and Winston, Inc.

Kiparsky, Paul. 1971. Historical linguistics. In William O. Dingwall, ed., A survey of linguistic science, 576-648. College Park: University of Maryland Linguistics Program.

Kontra, Miklos. 1992. Hungarians turned gateniks in 1990, American Speech 67.2.216-222.

Kurylowicz, Jerzy. 1945-9. La nature des procès dits analogiques. Acta Linguistica 5.15-37.

Labov, William. 1981. Resolving the neogrammarian controversy. Language 57.267-308.

Labov, William. 1994. Principles of linguistic change. Volume 1: Internal factors (= Language in Society 20). Oxford: Blackwell.

Lunt, Horace G. 1974. Old Church Slavonic Grammar. The Hague: Mouton.

Manczak, Witold. 1958. Tendances générales des changements analogiques. Lingua 7.298-325, 387-420.

Mayerthaler, Willi. 1981. Morphologische Natürlichkeit. Wiesbaden: Athenaion (published in translation (by Janice Seidler), 1988, as Morphological naturalness). Ann Arbor: Karoma Press).

Meillet, Antoine. 1897. Recherches sur l'emploi du génitif-accusatif en vieux slave. Paris.

Montgomery, Michael and Guy Bailey. *In which*: a new form in written English?. American Speech 66.147-163.

Nevis, Joel A. 1986. Declitiicization and deaffixation in Saame: abessive *taga*. In Brian D. Joseph, ed., Studies on language change (Ohio State University Working Papers in Linguistics 34), 1-9. Columbus: The Ohio State University Department of Linguistics.

Newmark, Leonard; Philip Hubbard; and Peter Prifti. 1982. Standard Albanian. A reference grammar for students. Stanford: Stanford University Press.

Prokosch, E. 1938. A comparative Germanic grammar. Baltimore: Linguistic Society of America.

Riley, Kathryn and Frank Parker. 1986. Anomalous prepositions in relative clauses, American Speech 61.291-306.

Robertson, John. 1975. A syntactic example of Kurylowicz's Fourth Law of Analogy in Mayan. International Journal of American Linguistics 41.140-147.

Schilling-Estes, Natalie and Walter Wolfram. 1994. Convergent explanation and alternative regularization patterns:*were/weren't* leveling in a vernacular English variety. Paper presented at the annual meeting of the Linguistic Society of America, Boston (January, 1994).

Schuhmacher, W. W. 1989. More on *-gate*. American Speech 64.380.

Shapiro, Michael. 1990. On a universal criterion of rule coherence. In Wolfgang U. Dressler; Hans C. Luschützky; Oskar E. Pfeiffer; and John R.Rennison, eds., Contemporary morphology (Trends in Linguistics. Studies and Monographs 49), 25-34. Berlin: Mouton de Gruyter.

Skousen, Royal. 1989. Analogical modeling of language. Dordrecht: Kluwer Academic Publishers.

Smith, Jo R. 1981. *Inwhich*: A New Case Form? American Speech 56.310-311.

Stang, Christian. 1966. Vergleichende Grammatik der baltischen Sprachen. Oslo: Universitetsforlaget.

Thomason, Sarah G. and Terrence Kaufman. 1988. Language contact, creolization, and genetic linguistics. Berkeley: University of California Press.

Thurneysen, Rudolf. 1970. A grammar of Old Irish (translated from the German by D. A. Binchy and Osborn Bergin). Dublin: The Dublin Institute for Advanced Studies.

Tiersma, Peter. 1978. Bidirectional leveling as evidence for relational rules. Lingua 45.65-77.

Traugott, Elizabeth Closs and Bernd Heine, eds. 1991. Approaches to grammaticalization. Volume 1: Focus on theoretical and methodological issues. Volume 2: Focus on types of grammatical markers (= Typological Studies in Language 19.1-2). Amsterdam: John Benjamins Publishing Co.

Trudgill, Peter. 1990. The dialects of England. Cambridge: Basil Blackwell.

Vincent, Nigel. 1974. Analogy reconsidered. In J. M. Anderson and C. Jones, eds., Historical linguistics (Proceedings of the First International Conference on Historical Linguistics), Vol. 2, 427-445. Amsterdam: North Holland.

Wang, William S.-Y. 1969. Competing changes as a cause of residue. Language 45.9-25.

Watkins, Calvert W. 1962. Indo-European Origins of the Celtic Verb. Dublin: The Dublin Institute for Advanced Studies.

Werner, Heinz and Kaplan, Bernard. 1963. Symbol formation. An organismic-developmental approach to language and the expression of thought. New York: Wiley and Sons.

Winters, Margaret. 1995. Jerzy Kurylowicz: the so-called laws of analogy. Translated and Introduced.Diachronica 12.1.

Wurzel, Wolfgang. 1984. Flexionsmorphologie und Natürlichkeit. Ein Beitrag zur morphologischen Theoriebildung (Studia Grammatica 21). Berlin: Akademie Verlag (published in translation as Inflectional morphology and naturalness; Dordrecht: Foris).

OSU Working Papers in Linguistics 46.38-62

DIVERGENCE OF SYNTACTIC FRAMES AND DIACHRONIC CHANGE

HYEREE KIM

1. Introduction

This study aims to examine particular syntactic frames governed by the so-called impersonal verb in Old English (OE) and Middle English (ME). The study will show that the syntactic frames of those verbs are so heterogeneous that they cannot be reduced to a single frame. This synchronic diversity in the syntactic frames of different verbs will thus lead to different diachronic outcomes from OE to ME.

The traditional term "impersonal verbs" refers to those verbs that are able to occur in the "impersonal construction". Following Denison (1993:62), we define an impersonal construction as a nominativeless construction in which the verb has 3 Sg. form and there is no nominative NP controlling verb concord. An impersonal verb is thus distinguished from an impersonal construction because impersonal verbs not only occur in impersonal constructions but also have the potential to occur in other types of constructions.

In an impersonal construction in OE, the impersonal verb can occur with a finite or nonfinite S' (1b), or with a genitive noun phrase (1c): [1]

(1) a. me ofhriwþ
I(Dat/Acc) rue(3-Sg)
' I rue' (Visser 22: ÆGram 33)[2]

[1]Since the impersonal construction lacks an explicit subject in surface, it is hard to translate the examples literally according to Modern English (NE) syntax which requires the presence of subject NPs. It is not difficult though to give a paraphrase. For example, *(of-)hreowan* in (1) is glossed as 'rue' according to its NE descendent but it can be rendered as either 'be depressed; regret; be sorry' etc. making the human oblique experiencers subjects or 'depress, oppress' etc. making the genitive causes subjects.

[2]In this example and the following, the citation from another article is marked by the author of the article, the page number and the source of the text as represented in the article with the separation of colon. The

43

BEST COPY AVAILABLE

b. me on minum hyge hreoweþ þæt hie heofonrice agan
I(Dat) in my mind rue(3-Sg) that they heaven possess
'I regret in my mind that they should possess heaven' (Gen i 426)

c. him ofhreow þæs mannes [3]
he(Dat) rue(1/3-Sg) the man(Gen)
'he was sorry for the man' (BT)

In ME, impersonal constructions are still found. The following example shows that *reuen* "to rue", descendant of OE *hreowan*, occurs in impersonal constructions:

(2) him reoweþþ þatt he nafeþþ nohht ...
he(Dat) rues that he not-has not
'he was sorry that he does not have ...' (Orm 5570)

The impersonal construction of (1) above is not the only type occurring with the impersonal verb even in OE. Along with the type (1c), reintroduced in (3a) below, the verb can take the nominative cause (=agent) (3b) or the nominative experiencer (=recipient) (3c). We will call (3a) impersonal, (3b) causative and (3c) personal:

(3) a. him ofhreow þæs mannes
he(Dat) rued the man(Gen)
'he pitied the man' (ÆCHom i. 192.16)

b. þa ofhreow ðam munece þæs hreoflian mægenleast
then rued the monk(Dat) the leper's feebleness(Nom)
'then the monk pitied the leper's feebleness' (ÆCHom i. 336.10)

c. Se mæssepreost ðæs monnes ofhreow
the priest(Nom) the man(Gen) rued
'the priest pitied the man' (ÆLS ii. 26.262)

In the following section we will see how these different syntactic frames have been dealt with in previous studies and what their problems are.

2. Previous studies and their problems

Based on the data (3), Fischer and van der Leek (1983:337) note that, rather than assuming that impersonal verbs had one meaning in OE and another meaning in NE,[4] both meanings existed side by side in OE, systematically associable with different syntactic constructions as follows:

---

source of the text is marked "C" if the text is from the Concordance, and BT and BTs if from the Bosworth-Toller dictionary and the supplement respectively.

[3]In (1c) an accusative noun phrase or a prepositional phrase may occur instead of a genitive one:

i. him gelicade here þeawas
he (Dat) liked their virtues (Nom/Acc)
'he liked their virtues; their virtues please him' (F. & L. 347. Chron. 201)

ii. menn ... scamaþ nu for goddædan
man (Dat) cause/feel-shame now for good-deeds
'man is now ashamed of good deeds' (Elmer 60: W.Sermo 62.153)

It is not certain that they share exactly the same distributional attributes and the same semantics and that those occurrences are confined to only a specific subset of impersonal verbs. Further studies are needed.

[4]This kind of claim was actually made in Jespersen (1927) and Lightfoot (1979). Jespersen states that in most cases the verb began by meaning 'give an impression' and came to mean 'receive an impression'.

(4) i. _ NP NP — (S')
| NP: DATIVE; θ-role: experiencer |
| / NP: GENITIVE \ θ-role: cause | 'neutral meaning'
|_ \ S' / _|

ii. _ NP — (S')
| NP: DATIVE; θ-role: experiencer |
| / subject NP \ θ-role: cause | 'causative meaning'
|_ \ S' / _|

iii. _ NP — (S')
| / NP: GENITIVE \ θ-role: cause |
| \ S' / | 'receptive meaning'
|_ subject NP; θ-role: experiencer _|

Among these three possible entries, Fischer and van der Leek argue, the entry type (i) is to be in the lexicon because it specifies the lexical Cases peculiar to the verb. And the constructions represented by the other two may be derived by move-α. The members in (i) OPTIONALLY assign the lexical Cases specified in their entries, whereas non-impersonal verbs OBLIGATORILY assign the lexical Cases for which their entries are marked. In order to derive (ii), the cause NP does not receive lexical Case from the verb and thus the NP undergoes NP movement into subject position and nominative Case is assigned at surface level. Similarly for (iii), the experiencer NP does not receive lexical Case and thus undergoes NP movement to subject position.

To handle the same data, Lightfoot(1991) introduces the analysis of Belletti and Rizzi (1988) on Italian psych-verbs into the account of OE. With the lexical entry (5bii), the theme does not have an inherent case at D-structure nor could it receive the objective structural case because Vs assign structural case only if they have external arguments. Thus the theme could receive nominative case at S-structure:

(5) a. S[NP INFL VP[experiencer V'[theme verb]]]
b. Lexical entries
i. hreowan: experiencer-dative; (theme-genitive)
ii. lician: experiencer-dative; theme

As most synchronic generative syntax idealizes variation away, Fischer and van der Leek's approach implicates that all the verbs categorized as impersonal could occur in three syntactic types (i), (ii) and (iii). This is reflected in their use of the data: they make a random use of verbs for examples representing each type. Lightfoot (1991:134), following Anderson (1986), assumes that *hreowan*, in showing all three possibilities, represents the typical case, and that many verbs manifesting only one or two of these possibilities in fact are revealing only accidental gaps in the texts. However, syntactic divergence among these verbs does not seem to be just the result of accidental gaps because some syntactic frames and constructions are never found with a certain verb not only in OE but throughout later periods. In this case, we cannot be sure that it is just an accidental gap, and then there is a possibility of overgeneralization.

Also, Fischer and van der Leek's derivation of (4iii) from (4i) by move-α will predict that the experiencer NP that does not receive lexical Case will move to a subject position but the syntactic features of the cause complement should remain unchanged from (4i). In the

following sections, however, we will see that the cause of impersonal constructions show different category distributions from those of personal constructions.

3. Divergent syntactic frames for OE impersonal verbs

The impersonal verbs we examine are the RUE and PLEASE verbs that survive in later stages. Those verbs are *hreowan, sceamian, eglian, lician, lystan, langian* in particular. The data are mainly surveyed for OE from the Concordance (C) and Bosworth-Toller dictionary (BT) and its supplement (BTs). The syntactic frames in which an impersonal verb can occur are as follows:[5]

(6) In the syntactic frame of [NP_1 (experiencer or theme) - V - X (cause or agent)],[6]
I. [NP_1 [Dat/Acc] - V - NP [Gen]]
II. [NP_1 [Nom] - V - NP [Gen]]
III. [NP_1 [Dat/Acc] - V - NP[Acc]]
IV. [NP_1 [Nom] - V - NP[Acc]]
V. [NP_1 [Dat/Acc] - V - S[Fin]]
VI. [NP_1 [Nom] - V - S[Fin]]
VII. [NP_1 [Dat/Acc] - V - S[Nnf]]
VIII. [NP_1 [Nom] - V - S[Nnf]]
IX. [NP_1 [Dat/Acc] - V - NP[Nom]]

Here the broad classifications of types (i), (ii), and (iii) in Fischer and van der Leek (1983) and of types N, S, I, and II in Elmer (1981) are subdivided in more detail. The following is a rough correspondence between the features in (6) and classes of Fischer and van der Leek (1983) and Elmer (1981) respectively. (6V) and (6VII) are ambiguous between impersonal and causative constructions depending on whether S is considered as the subject or not. In this case I will call them neutrally as non-nominative constructions (=type i/ii).

(7)	F & L (1983)	Elmer (1981)
I.	type i	type N
II.	type iii	type II
III.	type i	type N
IV.	type iii	transitive
V.	type i	type S
VI.	type iii	type II
VII.	type i	type S
VIII.	type iii	type II
IX.	type ii	type I

---

[5]A prepositional phrase has been considered as an cause argument alternatively with NP[Gen]:

þu	eart	sunu	min	leof,	on	þe	ic	wel	licade
you are	son	my	beloved, in	you I(Nom)	well	liked(1/3, Sg)			
'you are my beloved son, whom I liked well'									(C: MkGl(Ru) 1.11)

Then, we might need to consider another property: whether X (the cause) can occur as PP in impersonal or non-impersonal constructions. However, as Denison (1990:115) has pointed out, it is questionable that the PP is consistently a cause argument, because in some sentences, the PP is found along with another cause argument:

þas	þing	ic	on	þam	foresprecenan	bisceope	swiþe	lufie
these	things	I	in	the	aforementioned	bishop	very-much	love
'these things I love very much in the aforementioned bishop'								(C: Bede 206.18)

In this survey, therefore, we will not include PPs. But when we find a notable use of PP with specific verbs, we will put those instances in the footnote.

[6]Note that the format [NP1 - V - X] does not specify word order of a sentence.

BEST COPY AVAILABLE

Treating I, III, V and VII, for example, as one category type i, Fischer and van der Leek (1983) fail to capture the variation across the type with regard to a lexical item. Similarly Elmer (1981) also overlooks, for example, the variation across different types of clause, namely finite and nonfinite clauses, treating them as one. Nine classes in (6) are further elaboration of Denison (1990) where five classes were studied. In the following sections, we will see individual verbs with respect to their syntactic frames.

3.1 *hreowan* [7]

This verb occurs with the genitive in both impersonal (I) and personal (II) constructions:

(8) [NP_1 [Dat/Acc] - V - NP [Gen]]:
Ne þe hreowan þearf ealles swa micles swa þu me sealdest
not thee(Dat/Acc) rue need all(Gen) as much as thou me gave
'you need not regret all you gave me much as it was' (BTs: Seel 150)

(9) [NP_1 [Nom] - V - NP [Gen]]:
Hie ne magon ealneg ealla on ane tid emnsare hreowan
they(Nom) not can always all(Gen) at one time equal-sore rue
'they cannot always repent of all at once with equal contrition' (CP 413.29)

Genuine occurrences of NP[Acc] cause exist but are rare. However, the number will increase by considering numerous sentences which are indeterminate between nominative and accusative. The following is an impersonal construction (III) in which the cause NP should be interpreted as accusative because the predicate does not agree with it:

(10) [NP_1 [Dat/Acc] - V - NP[Acc]]:
a. þonne hreoweð hyre swiðe þa yfelan dæda
then rues(Sg) her(Dat) very-much the(Nom/Acc-Pl) evil deeds
'then she rues of the evil deeds very much' (C: HomS 4 (ForstVercHom 9) 80)
b. hælend þa tosomne cliopade leorneras his cwæþ mec hreoweþ
lord then together called learners his said me rues(Sg)
þas mengu
these people(Nom/Acc-Pl)
'then the Lord called his disciples to him and said, "I feel sorry for these people"'
(C: MtGl(Ru) 15.32)

The syntactic frame IV is not found in our corpus. Elmer (1981) explicitly states that there is no genuine evidence in OE of transitive use as in a putative **he hreoweþ þa dæd*.

A finite clause is very frequently found in non-nominative constructions (V) as follows:

(11) [NP_1 [Dat/Acc] - V - S[Fin]]:
Hreaw hine swiðe þæt he folcmægþa fruman aweahte
rued him (Acc) much that he nations first-born aroused
'he repented much that he had stirred to life the first-born of the nations' (Gen 1276)

Compared to this, the finite clause is not found with a nominative (VI) in our corpus. Elmer also finds no occurrences of these.

[7] The surface forms surveyed are: hreow, hreowan, hreowen, hreoweþ, hreowþ.

The nonfinite clause does not occur with *hreowan* either in non-nominative constructions (VII) or personal constructions (VIII). It is contrasted with the fact that S[Fin] is very commonly found in the same non-nominative constructions. This contrast tells us that to consider both finite and nonfinite clauses as one general class fails to capture an important fact about impersonals.

The non-impersonal causative meaning of the verb *hreowan* 'to cause sorrow, depress' is also found as follows:

(12) [NP$_1$ [Dat/Acc] - V - NP[Nom]]:

Gif	ðu	ongite	ðæt	him	his synna	hreowen
if	thou	understand	that	him(Dat)	his sin(Nom/Acc, Pl)	rue(Pl)

'if you understand that his sins cause him sorrow' (BT: L.de Cf 2)

In sum, *hreowan* is apparently found in all types (i), (ii), and (iii) of Fischer and van der Leek (1983). Further inspection, however, shows that it selects more varieties of categories as a cause argument (i.e. NP[Gen], NP[Acc] and S[Fin], but not S[Nnf]) when the verb occurs in impersonal constructions than when it occurs in personal constructions (i.e. only NP[Gen]). It is also interesting that both personal constructions with the receptive meaning 'to regret, repent' of the verb like (9) and causative constructions with causative meaning 'depress' like (12) are found in the same stage.

3.2 *sceamian* [8]

The genitive NP is very frequently found with *sceamian* both in impersonal (13) and personal constructions (14):

(13) [NP$_1$ [Dat/Acc] - V - NP [Gen]]

a. Martiri ne sceamode ðe min ofer eordan, ne mc
Martyrius, not shamed thee I(Gen) on earth, nor me
ne sceamað þin on heofonum
not shames thou(Gen) in heaven
'Martyrius, you were not ashamed of me on earth, nor will I be ashamed of you in heaven' (ÆCHom i. 336.20)

b. Oft ðone geþyldegestan scamaþ ðæs siges
often the most-patient(Acc) shames the victory(Gen)
'often the most patient man is ashamed of the victory' (CP 227.19)

(14) [NP$_1$ [Nom] - V - NP [Gen]]

a. Ic ðæs næfre ne sceamige
I(Nom) that(Gen) never not shame
'I am not ashamed of that' (BT: Ps.Th 34.1)

b. ðios sæ cwið ðæt ðu ðin scamige Sidon
the sea says that thou(Nom) thyself(Gen) be-ashamed Sidon
'the sea tells you to be ashamed of yourself, Sidon' (CP 409.33)

But no genuine accusative cause is found other than some indeterminate cases in either impersonal or personal constructions.[9]

[8]The surface forms surveyed are: sceamaþ, sceamian, sceamiaþ, sceamie, sceamien, sceamode, scamaþ, scamian, scamiaþ, scamie, scamien, scamode, scamodon

[9]The following example might be a candidate for an impersonal construction:

Þeal þæt hwæne	sceamode	scylda	on worulde,	þæt

A finite clause very often occurs in non-nominative constructions as in (15). It is also found in personal constructions as in (16):

(15) [NP_1 [Dat/Acc] - V - S[Fin]]

a. hy scamaþ ðæt hy betan heora misdæda
they(Acc) shames that they compensate for their misdeeds
'they are ashamed to make up for their misdeeds' (BT)

b. þæt mænigne mon sceamaþ þæt he wiorðe wyrsa
that many(Acc) man shames that he become worse
'that many a man is ashamed that he would become worse' (C: Bo 30.69.11)

(16) [NP_1 [Nom] - V - S[Fin]]

gif we scomiaþ ðæt we to uncuðum monnum suelc sprecen
if we shame that we to unknown men such speak
'if we are ashamed to speak so to strangers' (CP 63.5))

A nonfinite clause is found only in non-nominative constructions in our corpus, but not in personal constructions:

(17) [NP_1 [Dat/Acc] - V - S[Nnf]]

a. Ac me sceamað nu to gereccenne hu...
but I(Dat/Acc) shames now to recount how
'but I am ashamed now to recount how...' (LS (MaryofEgypt) 2.327)

b. Us sceamað to secgenne ealle ða sceandlican wiglunga
we(Dat/Acc) shames to say all the disgraceful witchcraft
'we are ashamed to say all the disgraceful witchcraft' (LS (Auguries) 1.100)

Elmer's list shows no instances of causative meaning of *sceamian*, but we find the following ambiguous example:

(18) [NP_1 [Dat/Acc] - V - NP[Nom]]

?And heora æfstu eac ealle sceamien[10]
and their hatreds(Nom/Acc-Pl) also all(Nom/Acc-Pl) shame(Pl)
'and their hatreds would also cause all to feel shame' (PPs 69.4)

This example is indeterminate between causative construction (IX) and [NP_1 [Nom] - V - NP[Acc]] (IV) because both *æfstu* and *ealle* can be nominative and accusative. Since both these two types are not found with genuine examples in our corpus, it seems totally indeterminate. However, the fact that personal usage like (IV) was very limited in OE in

---

all that one(Acc) shamed(Sg) fault(Nom/Acc/Gen-Pl) in world that
'all of the guilty acts in the world which one was ashamed that ...' (C: JDay ii. 141)

However, *scylda* is more likely to be a genitive in the context given.

For personal construction, the following indeterminate example is found:

?hi ne scamodon spræca his ofer ele
they(Nom/Acc) not shamed(Pl) speech(Nom/Acc/Gen-Pl) their over oil
'they were not ashamed of their words over oil (?)'

<- Molliti sunt sermones eius super oleum (His words became softened more than oil) (PsGlJ(Oess) 54.22)

Since the OE glosses do not exactly match those of Latin, it is probably the mistake of the glossator in word-to-word translation and thus this example is problematic because of its probable ungrammaticality as well as indeterminacy.

[10]From here on, I use "?" for the sentences indeterminate in grammatical cases or questionable for various reasons.

general while causative usage like (IX) is used in a later stage may lead us to conclude that (18) belongs to a causative construction.

Granted this example, the verb *sceamian* would be said to occur in all three types of constructions of Fischer and van der Leek (1983)— impersonal (type i), personal (type iii) and causative (type ii).

3.3 *eglian* [11]

In our corpus, *eglian* is not found with any genuine genitive. Also, no genuine accusative cause is found in impersonal constructions except for some examples indeterminate from the nominative cause.[12] As a candidate for a personal construction, we find a single example as follows:[13]

(19) [NP_1 [Nom] - V - NP[Acc]]
?Se man se ðe unclæne neat þigeð for his þearfum, ne eglað þæt nawiht
the man who unclean cattle consume for his needs, not ails that nothing
'the person who consumes unclean meals for his needs, will suffer nothing'
(C: Conf I.1(Spindler) 399)

The finite clause occurs with *eglian* only in non-nominative constructions, whereas nonfinite clauses are found neither in non-nominative (VII) nor in personal (VIII) constructions:

(20) [NP_1 [Dat/Acc] - V - S[Fin]]

Him [Cain]	eglde	ðæt	he [Abel]	wæs	betra	ðonne	he	
he(Dat)	ailed	that	he	was	better	than	he	

'he was troubled that he was better than he' (CP 235. 8)

The cause nominative NP is very commonly found with *eglian* as in (21):

(21) [NP_1 [Dat/Acc] - V - NP[Nom]]

a. þæt	he	us	eglan	moste	
that	he(Nom)	us(Dat/Acc)	ail	might	

'that he might trouble us' (BT: Jud 185)

b. Him	næfre	syððan	seo	adl	ne	eglode
him(Dat)	never	since	the	illness	not	ailed

'the illness never ailed him afterwards' (BT: Guth 60.8)

[11] The surface forms surveyed are: eglaþ, eglde, egle, eglede, egleþ, eglian, eglige, eglode

[12] In the following example, *nan ðing* is indeterminate between the nominative and the accusative:

him	nan ðing		wiðinnan ne	eglað ænigre		ðrosnunge oððe gewæcnlysse		
him(Dat)	no thing(Nom/Acc)		within not	ails	any(Dat/Gen)	corruption or	weakness	

'nothing pains him within [it] of any corruption or weakness' (C: ÆCHom II, 43.321.95)

However it is more likely that *nan ðing* is a nominative because the genuine nominative cause is found significantly in other instances.

[13] Since this is the only example in which the verb *eglian* is ever used in personal constructions and also the text itself is a translation from Latin, it is not certain whether this represents a genuine usage of the nominative experiencer *se man* with the accusative cause *þæt* or the matrix clause is type (i/iii) with *þæt* referring to the former clause.

Except for (19) which is a translation from Latin, the causative construction is dominant for *eglian* in OE. Even possible impersonal constructions are rarely found only with nonfinite but not with other categories.

3.4 *lician*[14]

Although Denison notes that no genuine occurrences of the genitive NP are found, we can see the following example as candidates.[15] The genitive is only found in impersonal constructions:

(22) [NP_1 [Dat/Acc] - V - NP [Gen]]
Petrus cwæð, wel me licað þæs þe þu sægst
Petrus said well I(Dat/Acc) likes that(Gen) that you say
'Peter said: it pleases me well what you say' (C: GD 1(H) 4.20.4)
[cf. Petrus cwæð: wel me licað þæt(Acc) þu sægst. (C: GDPref 3(C) 34.246.17)
Petrus cwæð: me licað þæt þæt(Acc) þu sægst. (C: GD 2(H) 3.108.22)]

The accusative is found only in impersonal constructions (23) and no genuine example is found for personal constructions in our corpus.[16] In (23) *þa* cannot be a nominative because if it were, it would cause the verb to take the plural form to agree with it:

(23) [NP_1 [Dat/Acc] - V - NP[Acc]]
ac wel licað wuldres drihtne, þa þe hine him
but well likes(Sg) glory lord(Dat) those(Acc-Pl) who him them
ondrædað dædum and wordum
dread deeds and words
'but the Lord of glory is well pleased with those who fear him in their deeds and speeches' (PPs 146.12)

A finite clause is found only in non-nominative constructions:

(24) [NP_1 [Dat/Acc] - V - S[Fin]]
þa licade hire ... þæt heo wolde þa baan up adon
then liked her (Dat/Acc) that she would the bones up take
'then she liked to take up the bones' (BT: Ælfred Bede 292.5)

---

[14]The surface forms surveyed are: lician, liciaþ, licie, licien, licodan, licode, licodon, licaþ.

[15]Denison (1990:114) incorrectly states that the *Concordance* leads to perhaps four example of type (i) (*ge-lician*, all of which have the cause argument apparently in the accusative not in the genitive. Others have a sentential cause, or a nominal cause indeterminately nominative or accusative and are thus ambiguous between types (i) and (ii). Elmer's (1981) survey also shows that this verb is never found in the syntactic frame of [NP[Dat]-NP[Gen]] in later stages, either.

[16]Only indeterminate sentences such as the following are found:
'we a worhton, ... georne þæt God licode
we ever did earnestly what(Nom/Acc) God(Nom/Acc) liked(Sg)
'we always have done earnestly what God liked (we always have done earnestly what pleased God)' (C: WHom 13.77)
Since both *þæt* and *God* are totally indeterminate, this can be analyzed to three possibilities: i) impersonal with the accusative cause *þæt*, ii) causative meaning 'please' treating *þæt* as nominative and *God* as accusative, iii) personal with receptive meaning 'like' (i.e. personal) treating *God* as nominative and *þæt* as accusative (i.e. transitive use). Since except for possibility (iii) genuine usage of (i) and (ii) is found, we may conclude that this example belongs to (i) or (ii), but not to (iii).

57 BEST COPY AVAILABLE

Similarly a nonfinite clause is also found only in non-nominative constructions in our corpus:

(25) [NP$_1$ [Dat/Acc] - V - S[Fin]]
þe licode mid him to beonne
you(Dat/Acc) liked(Sg) with them to be
'you liked to be with them' (C: Ps 43.5)

Nominative NPs with causative meaning are found in numerous instances as in (26):

(26) [NP$_1$ [Dat/Acc] - V - NP[Nom]]
a. Æghwylc man ... þurh gode dæda Gode lician sceal
every person(Nom) through good deeds God(Dat) like shall
'Everyone shall please God through good deeds' (BlHom 129.33)
b. forþam hy þe þa licodon
because they(Nom-Pl) you(Dat/Acc) then liked(Pl)
'because they then pleased you' (C: Ps 43.5)

In sum, *Lician* is used in various syntactic frames when it is used without a nominative. For personal usage, a single instance is found in our corpus, also cited by Fischer and van der Leek (1983:352) as a crucial example for personal usage of impersonal verbs in general, along with a prepositional phrase:

(27) ?þu eart sunu min leof, on þe ic wel licade
you are one my dear in whom/thee I well liked
'you are my dear son in whom I was well pleased' (Mark; Skeat 1871-87: 11)
< Tu es filius meus dilectus, in te complacui.

However, since this reflects word-to-word (literal) translation from Latin, we cannot be so sure if this is a normal OE expression. Thus, it is notable that causative usage with the meaning of 'to please' is much more commonly found than personal usage with the meaning of 'to like; to be pleased'.

3.5 *langian*[17]

In general, the occurrences are very limited and the non-impersonal usage is hardly found. The genitive NP is found in impersonal constructions as follows:

(28) [NP$_1$ [Dat/Acc] - V - NP [Gen]]
a. Hine þæs heardost langode hwanne he ...
him(Acc) that(Gen) eagerly longed when he
'he eagerly longed for the time when he...' (BT: BlHom 227.1)
b. Me a langað þæs þe ic þe on þyssum hynðum wat
me(Dat/Acc) ever longs that(Gen) that I you in this affliction know
'I am always distressed by the fact that I know you being afflicted' (BTs: Seel 154)

But in our corpus no genuine accusative cause is found.[18] Nor are the finite and nonfinite clauses. The causative construction (IX) is not found either.

[17]The surface forms surveyed are: longaþ, langian, langiaþ, langode, langaþ. *Langian* is found to occur with prepositional phrases having *on, for, æfter*.

[18]Only some indeterminate examples between nominative and accusative are found. The following is a possible candidate:

The following is ambiguous between personal and impersonal constructions because *hæleð* can be either a nominative or accusative:

(29) ?hæleð langode, wægliðende, swilce wif heora, hwonne hie ...
hero(Nom/Acc) longed seafarers likewise wives their when they
'the hero, the seafarers and their wives also, yearned for when...' (C: GenA,B 1431)

Since genuine impersonal constructions are found while personal constructions are not, it is safer to presume (29) is impersonal. Then we can conclude that a personal construction was not used with this verb in OE. It is notable that *langian* is not found with a causative meaning while the other verbs above are.

3.6 *lystan*[19]

A genitive cause is commonly found with *lystan* in both impersonal and personal constructions as follows:

(30) [NP_1 [Dat/Acc] - V - NP [Gen]]
a. ðises me lyst nu get bet
this(Gen) me(Dat/Acc) pleases/is pleased now yet better
'I am still better pleased with this' (BT: Bt 35.4)
b. hine nanes þinges ne lyste on ðisse worulde
him(Acc) none(Gen) thing(Gen) not pleased/was pleased in this world
'he cared for nothing in this world' (BT: Bt 35.6)

(31) [NP_1 [Nom] - V - NP [Gen]]
seo sawl þyrsteð and lysteð Godes reces
the soul(Nom) thirsts and desires God's kingdom(Gen)
'the soul thirsts and desires the kingdom of God' (BTs: Gr.D 244.27)

We find the following examples with accusative cause in impersonal constructions only:

(32) [NP_1 [Dat/Acc] - V - NP[Acc]]
a. þu lufast þone wisdom swa swiðe and þe lyst hine swa wel
you love the wisdom so much and you(Dat/Acc) desires it(Acc) so well
'you love the wisdom so much and you want it so much' (C: Solil 1 42.17)
b. Hu ðone cealdan magan ungeliclice mettas lyste
how the cold stomach(Acc) different food(Acc-Pl) desired(Sg)
'how the cold stomach wanted different meals' (BTs:Lch.ii.160,8)

'Langað þe awuht, Adam, up to gode?
Longs you anything(Nom/Acc) Adam up from God
'Do you long for anything, Adam, from God above?' (C: GenA,B 495)
However, since *awuht* above can be also regarded as an adverb, this kind of example is really questionable. A transitive use (i.e. with the nominative subject and accusative object) is found with *langian* but with a slightly different meaning (i.e. 'to summon'). BT glosses this as a separate item:
Him com to Godes ænegel and cwæð þæt he sceolde þe him to langian
him came to God's angel and said that he should you(Dat/Acc) him to call
and þine lare gehyran
and your teaching hear
'God's angel came to him and said that he should summon you to him and hear your teaching'
(C: ÆLS (Peter's Chair) 121)

[19]The surface forms surveyed are: list, listan, listen, lyst, lyste, lysteþ, lyston, lysþ.

A finite clause is found in the impersonal construction only as follows:

(33) [NP_1 [Dat/Acc] - V - S[Fin]]
a. me lyste bet þ þu me sædest
me(Dat/Acc) desired better that you me said
'I was pleased better that you told me...' (BT: Bt 34.6)
b. me lysteþ, Petrus, þæt ic nu gyt sæcge fela
me(Dat/Acc) desires Peter that I now get say much
'Peter, I am pleased that I still now say a lot...' (C: GD 2(C) 36.174.27)

A nonfinite clause is found both impersonal and personal constructions as follows:

(34) [NP_1 [Dat/Acc] - V - S[Nnf]]
a. Hine ne lyst his willan wyrcean
him(Acc) not desires his will to work
'he does not want to do his will' (BT: BlHom 51.16)
b. him lyst gehyran þa halgan lare
him(Dat) desires hear the holy teaching
'he wishes to hear the holy doctrine' (C: ÆLet 2(Wulfstan 1) 5)

(35) [NP_1 [Nom] - V - S[Nnf]]
fela manna of manegum scirum geornlice fyston hine geseon
many men from many provinces eagerly desired him see
'many people from many provinces eagerly wished to see him' (C: GD 1(H) 16.45.19)

For type IX, no genuine example of a nominative cause is found in our corpus. In sum, *lystan* occurs in two types of constructions — impersonal, personal although in each type the categories that the verb selects are different.

3.7 Discussion

The following is the list of the different syntactic frames selected by each impersonal verb (I do not list the frames that are totally indeterminate because of case syncretism and "?" is used for the data which has or can been suspected because it is rarely found and only in Latinate syntax):

(36) 1. Hreowan
I. [NP_1 [Dat/Acc] - V - NP [Gen]] : type (i)
II. [NP_1 [Nom] - V - NP [Gen]] : type (iii)
III. [NP_1 [Dat/Acc] - V - NP[Acc]] : type (i)
V. [NP_1 [Dat/Acc] - V - S[Fin]] : type (i/ii)
IX. [NP_1 [Dat/Acc] - V - NP[Nom]] : type (ii)
2. Sceamian
I. [NP_1 [Dat/Acc] - V - NP [Gen]] : type (i)
II. [NP_1 [Nom] - V - NP [Gen]] : type (iii)
V. [NP_1 [Dat/Acc] - V - S[Fin]] : type (i/ii)
VI. [NP_1 [Nom] - V - S[Fin]] : type (iii)
VII. [NP_1 [Dat/Acc] - V - S[Nnf]] : type (i/ii)
IX. (?) [NP_1 [Dat/Acc] - V - NP[Nom]] : type (ii)
3. Eglian
IV.(?) [NP_1 [Nom] - V - NP [Acc]] : type (iii)
V. [NP_1 [Dat/Acc] - V - S[Fin]] : type (i/ii)

IX. [NP$_1$ [Dat/Acc] - V - NP[Nom]] : type (ii)

4. Lician
- I. [NP$_1$ [Dat/Acc] - V - NP [Gen]] : type (i)
- III. [NP$_1$ [Dat/Acc] - V - NP[Acc]] : type (i)
- V. [NP$_1$ [Dat/Acc] - V - S[Fin]] : type (i/ii)
- VII. [NP$_1$ [Dat/Acc] - V - S[Nnf]] : type (i/ii)
- IX. [NP$_1$ [Dat/Acc] - V - NP[Nom]] : type (ii)
- (?) (personal) : type (iii)

5. Langian
- I. [NP$_1$ [Dat/Acc] - V - NP [Gen]] : type (i)

6. Lystan
- I. [NP$_1$ [Dat/Acc] - V - NP [Gen]] : type (i)
- II. [NP$_1$ [Nom] - V - NP [Gen]] : type (iii)
- III. [NP$_1$ [Dat/Acc] - V - NP[Acc]] : type (i)
- V. [NP$_1$ [Dat/Acc] - V - S[Fin]] : type (i/ii)
- VII. [NP$_1$ [Dat/Acc] - V - S[Nnf]] : type (i/ii)
- VIII. [NP$_1$ [Nom] - V - S[Nnf]] : type (iii)

We see in the above that not all the verbs take all three types of constructions. This is opposed to the generalizations or assumptions by Anderson (1986), Fischer and van der Leek(1983) and Lightfoot(1991). And there is no single verb that exactly exhibits Fischer and van der Leek (1983)'s syntactic frame in (4). Even the verb *hreowan* that has been treated as a typical example does not exactly allow for all syntactic frames of each of three types in (4). For example, their category S', which is also treated as type S in Elmer(1981), is too general to capture the difference in the occurrences of finite and nonfinite clauses for each verb. *Hreowan*, for example, varies in the cooccurrence with finite and nonfinite clauses: It occurs with finite, but not with nonfinite clauses. And even the finite clause occurs only in the non-nominative (type i/ii) construction, but not in the personal constructions. In this respect , Fischer and van der Leek (1983)'s formalization in (4ii) and (4iii) is an overgeneralization (i.e. S' must not occur in those frames for *hreowan*).

It is notable that when a verb selects a clause in the non-nominative construction, it must be S[Fin] rather than S[Nnf], because the data shows that if S[Nnf] can occur with a verb, S[Fin] can always occur. However the finite clause does not occur with all the impersonal verbs: *langian* is not found with any type of clause. In general, the occurrence of the genuine accusative cause is very rare compared to that of the genitive cause. Thus, different verbs behave differently with respect to the cooccurrence with a particular category. And the distribution of this category even differs according to which type of construction it occurs in. Fischer and van der Leek (1983)'s type ii (i.e. causative meaning) is appropriate for some of the impersonal verbs (e.g. *hreowan, eglian, lician, sceamian* (?)), but not for the others. Similarly Fischer and van der Leek's type iii (i.e. personal) is appropriate for some of the impersonal verbs (e.g. *hreowan, sceamian, lystan, eglian*(?), *lician*(?)), but not for the others (e.g. *langian*).

As seen in (36), impersonal verbs behave so diversely in their syntactic frames that they cannot be collapsed into a single basic frame as done in generative approaches. Only a single common feature is shared that keeps this group of verbs distinct from others: They are all able to occur without the nominative with the Dat/Acc personal experiencer.[20]

[20]Therefore, this group of verbs constitutes a syntactic constellation. The idea of morphological constellation has been originally proposed in Janda and Joseph (1990) where the various members are linked

61

BEST COPY AVAILABLE

4. Divergent syntactic frames for ME impersonal verbs

One of the notable changes between OE and ME is the collapse of the morphological case system. Due to this syncretism in ME, the NP[Gen] is not found except for the possessive. The NP[Gen] elsewhere in OE gives way to prepositional phrase with *of* (i.e. PP[of]). For this reason we can find PP[of] in ME in distributions similar to OE NP[Gen]. The ME data in the following are mainly from the Middle English Dictionary (MED).

4.1 *reuen*

The prepositional phrase with *of* occurs in both impersonal and personal constructions as follows:[21]

(37) [NP_1 [Dat/Acc] - V - PP [of]]
  a. himm reoweþþ off his a3henn woh & off hiss a3henn sinne
    'he repents his own wickedness and his own sin' (?c1200 *Orm.* 5566)
  b. of auelok rewede him ful sore
    'he was sorry very much for Haveloc' (c1300 *Havelok* 503)
  c. hir rewed of hir self ful sare, and haued for hir sin slic kare
    'she was sorry for her self very sorely and had such a care for her sin'
    (a1400(c1300) *NHom. (1) Magd.*p.15)

(38) [NP_1 [Nom] - V - PP [of]]
  a. no man shal rewe of thy misfare
    'no man shall repent your ill-faring' (a1450 *Yk.Pl.*39/115)
  b. my herte rwyth sore of the deth of hir that lyeth yondir
    'my heart sorely pities her death who lies yonder' (a 1470 Malory *Wks.* 118/24)

Because of the syncretism between the nominative and the accusative in non-pronominals, a unambiguous accusative is hardly found in the impersonal construction. However, in the personal construction the transitive use are commonly found with alleged accusative NPs on the assumption that no double nominative is possible in English.

(39) [NP_1 [Nom] - V - NP[Acc]]
  a. we schold rew þat sore
    'we should repent that sorely' (?a1325 *Swet ihc hend* p.81)
  b. God forbede that al a compaignye sholde rewe a synguler mannes folye
    'God forbade that all the company should repent a single man's folly'
    (c1395 Chaucer *CT.CY.* G.997)

---

to one another in some features but kept distinct from one another from other features. Refer to Välimaa-Blum (1988) for syntactic constellation of Finnish word order.

[21] The cause can occur in other PPs such as with *on* (upon), *for*. In an impersonal, the following is found.
  þe tiding com wiþ care to blauncheflour...for hir me reweþ sare
  'the time has come with care to whiteflower... for her I rue sorely' (c1330(?a1300) *Tristrem* 216)
In personal construction with the nominative we find the following.
  Iesu crist ... thu rew vpon me
  'Jesus Christ, have mercy on me' (?c1250 *Ar ne kuthe* 8)
  Noyt for his syn he sore rewys
  'not for his sin he rues sorely' (c1450(a1425) *MOTest.* 18346)

As in OE, a finite clause occurs with this verb only in non-nominative constructions, not in personal constructions:

(40) [NP$_1$ [Dat/Acc] - V - S[Fin]]
a. himm reowebþ þatt he dwelleþþ her swa swiþe lange onn eorþe
'he repents that he detains her so very long on earth' (?c1200 *Orm.* 5576)
b. þe wile sare rewen ðat tu ðe seluen ne haddest ...
'you will sorely repent that you yourself have not...'
(a1225(c1200) Vices & V. (1) 65/3)

Also as in OE, ***reuen*** is hardly found with nonfinite clause in ME. Just one example of personal construction is found in MED as a possibility:

(41) [NP$_1$ [Nom] - V - S[Nnf]]
lete us plesyn hym tyl þat he rewe in hell to hangyn hye
'let us please him until he repents to be hanging high in hell'(a1450 *Castle Persev.*723)

Nominative causes with the causative meaning 'to displease' of this verb are also found in ME as in OE:

(42) [NP$_1$ [Dat/Acc] - V - NP[Nom]]
a. Alle hie wepeð and wonið ... Hi me reweð swa swiðe ðat ic reste ne mai habben
'they all weep and woe... they displease me so much that I cannot take a rest'
(c1225(c1200) Vices & V.(1) 155/14)
b. I wott I have done wrang; þat sayng rewys me sore
'I know I have done wrong; to say so displeases me sorely'
(c1450(a1425) *MOTest* 15154)

In sum, the verb ***reuen*** can have all three types of constructions — impersonal, personal and causative — in ME.

4.2 *shamen*

The PP[of] cause occurs in both impersonal (43) and personal constructions (44).[22]

(43) [NP$_1$ [Dat/Acc] - V - PP [of]]
a. him sholde shamen of him
'he will be ashamed of himself' (a1225(?a1200) *Trin.Hom.* 73)

---

[22]The cause can occur as other PPs involving the prepositions *for, with* in both impersonal and personal constructions as follows:
a. (impersonal)
For þaim ne sal þe scam na mar
'you shall be ashamed no more for them' (a1400(a1325) Cursor 23498)
Me shames with my lyghame!
'I am ashamed of my body' (a1450 *Yk.Pl.* 25/110)
b. (personal)
þan schames nane with þair kyn, bot all may þam schame with þair syn, and with þair full pryde
'then nobody is ashamed of their race, but all may shame themselves with their sin and with their full pride' (c1450(?a1400) *Quatref Love* 479-80)
þat schamez for no schrewedschyp, schent mot he worþe
'the one that is not ashamed of any wicked behavior, may he become disgrade'
(c1400(?c1380) Cleanness 580)

b. of þine sinnes me mai somen and of þine redes
'I may be ashamed of your sins and your frailty' (c1250 Body & S (4) 46)

(44) [NP_1 [Nom] - V - PP [of]]
a. and shame thei of alle thingus that thei diden
'and they are ashamed of all things that they did' ((c1384) *WBible (1)* Ezek.43.11)
b. þai salle swa schame ay of þair syn
'they will always be ashamed of thier sin' (a1425(a1400) *PConsc.* 7159)

A transitive use is commonly found in the personal construction:

(45) [NP_1 [Nom] - V - NP[Acc]]
a. nyle thou schame the witnessing of oure Lord Jhesu
'you are never to be ashamed of witnessing to our Lord Jesus'
((c1384) WBible(1) 2 Tim.1.8)
b. whoso shameþ me and my wordis bifore men, I shal shame him bifore my fadir þat is in heuene
'whoever is ashamed of me and my words before men, I shall be ashamed of him before my father that is in heaven. (c1400 *7 Gifts HG* 153)

A finite clause is often found in both non-nominative (46) and personal constructions (47):

(46) [NP_1 [Dat/Acc] - V - S[Fin]]
a. vninete[read: vnimete] me scomeð þat hem[read: he] ...
unmeasurably I am ashamed that he ...' (Lay. Brut 12487: a1225(?a1200))
b. Hym schameþ þat hys lynage is so lowe
'he is ashamed that his lineage is so low' (c1450(1410) Walton *Boeth.* p.83)

(47) [NP_1 [Nom] - V - S[Fin]]
a. ne ssame ȝe noȝt þat ...
'you are not ashamed that ...' (a1325(c1300) *Glo. Chron. A* 7441)
b. Alle his bretheren schamyd that so noble a persoun schuld be putt with lewde-men
'all his brothers were ashamed that such a noble person should be put with ignorant men' (a1500(?c1425) *Spec. Sacer* 48/4:)

A nonfinite clause is often found in both non-nominative (48) and personal constructions (49):

(48) [NP_1 [Dat/Acc] - V - S[Nnf]]
a. Me shameþ for to begge
'I am ashamed to beg' (a1425 *Wycl.Serm.* 1.22)
b. Me shamed at that tyme to have more ado with you
' I was ashamed at that time to have more trouble with you'
((a1470) Malory *Wks.* 443/25)

(49) [NP_1 [Nom] - V - S[Nnf]]
a. I shamed to asken of þe king foote men & horsemen in felashipe of grace
'I am ashamed to ask of the king the footmen and horsemem in the fellowship of grace' ((a1382) *WBible (1)* (Bod 959) 3 Esd.8.52)
b. Thei shameden for to shewe to hem self her coueitise
'they were ashamed to show their covetess to themselves'
((c1384) *WBible(1)* Dan. 13.11)

The nominative cause with the causative meaning 'to disgrace' of the verb is also found:

(50) [NP_1 [Dat/Acc] - V - NP[Nom]]
a. He hauede him so shamed
'He had him(self) so disgraced' ((c1300) *Havelok* 2754)
b. Wolt thou shame thyselff?
'will you disgrace yourself?' ((a1470) Malory *Wks.* 1122/9)

In sum, the verb *shamen* also occurs in all three types of constructions in ME although the categories that they select vary.

4.3 *eilen*

The cause argument of PP[of] is not found with *eilen* in MED. Like other verbs, no genuine accusative cause is found in impersonal constructions. But in both causative constructions (51a) and personal constructions (51b), the accusative cause is used along with the nominative subject:

(51) a. [NP_1 [Dat/Acc] - V - NP[Nom]]
Him ȝleþ se blodrine
'the bleeding troubles him' (c1150)?OE) *PDidax* 49/1)
b. [NP_1 [Nom] - V - NP[Acc]]
And asked hym what he eyled
'and asked him what he was troubled with'
(1485(a1470) Malory *Wks.* (Caxton:Vinaver) 1258/3)

No instances of finite clauses and nonfinite clauses are found in MED with *eilen*.[23] The above example (51a) shows that the nominative *se blodrine* is a cause providing the causative meaning 'to trouble' to the verb. In sum, unlike *reuen* and *shamen*, *eilen* does not show impersonal usage in ME.

4.4 *liken*

PP[of] is (rarely) found with *liken* both in impersonal constructions (52) and personal constructions (53):[24]

(52) [NP_1 [Dat/Acc] - V - PP [of]]
Of that syght lykyd hym full yll
'that sight pleased him so badly' (a1500 *Tundale*(Adv) 1033)

---

[23]Some infinitive clauses are found with *what*. Without *what*, we can say the following example is impersonal. But with *what*, the infinitive is a result rather than a cause.
Alas, wat eiled vs to slepe þat we ne mitht him notht kepe?
'Alas, what troubled us to sleep so that we could not keep him?' (a1325(?c1300) *NPass.* 1911)

[24]*Liken* occurs with the cause with other prepositions such as *in* and *bi* in impersonal or personal constructions.
a. [impersonal]
Howe lyke yowe be þys mayde younge?
'how do you like this young maiden?' (a1500(a1450) Parton. (1) (Add) 5452))
b. [personal]
þer may no man be saf but if he loue and lyke in þe name of Ihesu
'there no man may be safe but he loves and like in the name of Jesus'
(?a1475(a1396) *Hilton *SP* I.44.28b)

(53) [NP$_1$ [Nom] - V - PP [of]]
a. Som man mai lyke of that I wryte
'a certain man may like what I write' ((a1393)Gower *CA* prol.21)
b.Of this message he liked yll
'he liked this message badly' (a1450 Gener.(1) 3124)

The accusative cause is found in both impersonal (54) and personal constructions (55):

(54) [NP$_1$ [Dat/Acc] - V - NP[Acc]]
a. Sei me, loueli lemman, how likes þe me nowþe?
'tell me, lovely mistress, how do you like me now?' (a1375 *WPal.* 1740)
b. So wel vs liketh yow ... that we ne kouden nat ...
'we like you so well ... that we could not ...' ((c1395) Chaucer *CT.Cl.* E.106)
c. The more that a man beheld hym, the bettre hym schuld like hym
'the more a man beheld him, the better he should like him' (c1450 Ponthus 12/9)

(55) [NP$_1$ [Nom] - V - NP[Acc]]
a. Syr Launfal lykede her not ...
'sir Launfal did not like her ...' (a1500(?1400) Chestre *Launfal* 44)
b. [The Sultan] lekid hym right wele
'the Sultan liked him just well' (a1500(a1450) Gener.(2) 661)

A finite clause is found in both non-nominative and personal constructions:

(56) [NP$_1$ [Dat/Acc] - V - S[Fin]]
Me likez þat sir Lucius launges aftyre sorowe
'I was pleased that sir Lucius is preoccupied with sorrow'
(c1440 (?a1400) *Morte Arth. (1)* 383)
(57) [NP$_1$ [Nom] - V - S[Fin]]
God liketh nat that Raby men vs calle
'God is not pleased that Raby men call us' ((c1395) Chaucer *CT.Sum.* D.2187)

Along with the finite clause, the nonfinite clause is very often found with *liken* in both non-nominative (58) and personal constructions (59):

(58) [NP$_1$ [Dat/Acc] - V - S[Nnf]]
a. Hym likiþ ... for to lovuen Him
'he likes ... to love Him' (?a1475(a1396) *Hilton *SP* 1.29.18a)
b. Me liketh nat to lye
'I do not like to stay' ((a1420) Lydg. *TB* 4.1815)

(59) [NP$_1$ [Nom] - V - S[Nnf]]
a. As myn auctour liketh to devise
'as my author likes to devise' ((?c1421) Lydg. *ST* 1003)
b. ȝe þat louen & lyken to listen
'you love and like to listen' (a1375 *WPal.* 162)

The nominative cause is also found with the causative meaning 'to please' of the verb:

(60) [NP$_1$ [Dat/Acc] - V - NP[Nom]]
a. Drihhtin wel maȝȝ don All þatt himm sellfenn likeþþ
'Lord may do well all that pleases himself' (?c1200 *Orm.* 9912)

b. þis holi mihte, hit te wile likin be nihte oðer be daiȝe.
this holy might, it will please you by night or by day'
(a1225(c1200) *Vices & V. (1)* 85/25)

c. To don al that may like unto youre herte
'to do all that may please your heart' (a1425(c1385) Chaucer *TC* 5.133)

In sum, the verb *liken* is found in all types of constructions and select all types of categories in question.

4.5 *longen*

PP[of] is not found either in impersonal or in personal constructions.[25] The accusative cause is rarely found except the following example which is indeterminate whether the usage is impersonal or personal. But it is more likely that *long* is a transitive verb here because the accusative in impersonal constructions are very infrequent in general and no genuine example of this usage is found with *long* throughout its history:

(61) [NP_1 [Nom] - V - NP[Acc]]
?Say I wylle come whan I may And byddith hyr longe no-thinge sare
'say I will come when I can and bid her to feel sore longing for nothing'
(a1500 (?a1400) *Morte Arth. (2)* 511)

The cause as a finite clause is found with *longen* in non-nominative constructions, but not in personal constructions:

(62) [NP_1 [Dat/Acc] - V - S[Fin]]
Somdel hem longed... þt heuene cloue ofte atwo...
'he somewhat wished that the heaven split often into two'
(a1350(?c1280) *SLeg.Prol.CV* (Ashm) 45)

Compared to the finite clause, a nonfinite clause is found commonly in both impersonal (63) and personal (64) constructions:

(63) [NP_1 [Dat/Acc] - V - S[Nnf]]
a. hire longuede with hire broþer to speke
'she wanted to speak with her brother' (c1300 SLeg. (Ld) 198/14)
b. sore has me longed to se þi freli face
'I have badly desired to see the noble face' (c1375 WPal. 4570)
c. sore me longis launcelot to se
'sorely I long to see Lancelot' (a1500 (?a1400) *Morte Arth. (2)* 543)

---

[25]Other prepositional phrases with *after, to* etc. occur in both impersonal and personal constructions:
a. [impersonal]
swiðe þe longeð after laðe spelle
'very much thou long for loathful spell' (a1225(?a1200) Lay. *Brut.* 15808)
me longith to youre presense
'I long for you presence' (a1475 *Ludus C.* 357/75)
b. [personal]
ich langy so swiþe after Gorloys his wifue
'I long so much for Gorloy's wife' (c1300 *Lay. Brut (Otho)* 18918)
so longid this lady with lust to the Temple
'this lady so longed with lust for the temple' (c1450(?a1400) *Destr. Troy* 2914))

67 BEST COPY AVAILABLE

(64) [NP_1 [Nom] - V - S[Nnf]]
a. þe cwen...longede for to seon þis meiden
'the queen wanted to see this maiden' (c1225(?c1200) *St.Kath.(1)* 1556)
b. on a day she gan so sore longe to sen hire sister...
'on a day she began to yearn so sorely to see her sister'
(c1430(c1386) Chaucer *LGW* 2260)

The nominative cause is not genuinely found in MED. In sum, *longen* occurs in potentally impersonal (type i/ii) and personal constructions. The occurrence of a nominative cause is not found in our corpus.

4.6 *listen*

Only the NP[Gen] is found in the early period in case of impersonal constructions as follows:[26]

(65) [NP_1 [Dat/Acc] - V - PP [of]]
þe hura metes ne lyst
'thou does not want their food' (c1150(?OE) PDidax 29/19)

When we assume that *the ladies* is a nominative in the following example, the PP[of] is said to be found in personal constructions:

(66) [NP_1 [Nom] - V - PP [of]]
þe leuedis listed noght o [Frf: of] pride
'the ladies did not want the pride' (a1400(a1325) Cursor 1791)

Only examples with *what* are found as a possibility as an accusative. Since *what* can be the nominative as well as the accusative, it is indeterminate whether the following example is an impersonal with an accusative cause ([NP_1 [Dat/Acc] - V - NP[Acc]]) or a causative construction [NP_1 [Dat/Acc] - V - NP[Nom]]:

(67) [NP_1 [Dat/Acc] - V - NP[Acc]]
a. tomorwe wol I seye thee what me leste
'tomorrow I will tell thee what I want' ((c1390) Chaucer *CT.ML.* B. 742)
b. lete hym drynke it with qwat licour þat hym lyst
'let him drink it with what liquer that pleases him' (?a1450 *Agnus Castus* .../22)

However, the fact that a genuine nominative cause is not found in ME nor was it in earlier stages, and that instead an impersonal with an accusative cause existed in earlier stage may lead us to conclude that (67) belongs to the impersonal construction. For personal constructions, we find the following examples:

(68) [NP_1 [Nom] - V - NP[Acc]]
a. If ye list it be lefte, let me wete sone
'if you want it to be left, let me know soon' (c1450(?a1400) *Destr. Troy* 2611)

---

[26]The cause can occur as other PPs as in the following impersonal constructions:
schape þy cloute with þi scheres as þe liste aftir þe quantite of þe wounde
'make your clothes with you scissors if you wish some amount of wound'
(?a1425 **MS Hrn.* 95 101a/a)

Alls he mare & mare gett, a33 lisste himm affterr mare
'as he has more and more, he always desires more' (?c1200 *Orm.* 10220)

b. qwat þou [Ashm: þe] list ellys
'whatelse you desire' (a1500 *Wars Alex.* (Dub) 1761)

On the assumption that there is no double nominative construction in English, *qwat* must be interpreted as the accusative in (74b). But the fact that *þe* was used interchangeably in another manuscript again raises the issue of the ambiguity of analysis for *qwat*, one possibility as an impersonal, the other as a causative construction.

No finite clause is found as a cause with *listen* in MED. Contrasted to the finite clause, the nonfinite clause is found very often in both non-nominative (69) and personal (70) constructions:

(69) a. He... se33de þatt him lisste þa wel etenn off an appell
'he said that he then wished to eat well from an apple' (?c1200 *Orm.* 8119)
b. For wher as evere him lest to sette, ther is no myht which him may lette
'For where he ever wishes to remain, there is no power which may let him'
((a1393) Gower *CA* 1.37)

(70) a. whan that fortune list to flee, ther may no man the cours of hire withholde
'when the fortune desires to flee, no man can withstand the course of her'
((c1375) Chaucer *CT.Mk.* B. 3185)
b. Who list to have joie and mirth also of love
'who wishes to have joy and mirth of love' (a1425(?a1400) *RRose* 5028)

As for the nominative cause, no unambiguous data are found. For *listen*, impersonal and personal constructions are found in ME. The fact that OE did not show any unambiguous example of causative constructions and afterward in ME only ambiguous examples involving such as 'what' with indeterminate case are found in ME may lead us to conclude that those ambigous examples are not really causative constructions.

4.7 Discussion

The following is the list of the different syntactic frames selected by each ME impersonal verb:

(71) 1. Reuen
I. [NP_1 [Dat/Acc] - V - PP[of]] : type (i)
II. [NP_1 [Nom] - V - PP[of]] : type (iii)
IV. [NP_1 [Nom] - V - NP[Acc]] : type (iii)
V. [NP_1 [Dat/Acc] - V - S[Fin]] : type (i/ii)
VIII. [NP_1 [Nom] - V - S[Nnf] : type (iii)
IX. [NP_1 [Dat/Acc] - V - NP[Nom]] : type (ii)
2. Shamen
I. [NP_1 [Dat/Acc] - V - PP[of]] : type (i)
II. [NP_1 [Nom] - V - PP[of]] : type (iii)
IV. [NP_1 [Nom] - V - NP[Acc]] : type (iii)
V. [NP_1 [Dat/Acc] - V - S[Fin]] : type (i/ii)
VI. [NP_1 [Nom] - V - S[Fin]] : type (iii)
VII. [NP_1 [Dat/Acc] - V - S[Nnf]] : type (i/ii)
VIII. [NP_1 [Nom] - V - S[Nnf] : type (iii)
IX. [NP_1 [Dat/Acc] - V - NP[Nom]] : type (ii)
3. Eilen
IV.[NP_1 [Nom] - V - NP [Acc]] : type (iii)

IX. [NP_1 [Dat/Acc] - V - NP[Nom]] : type (ii)

4. Liken
I. [NP_1 [Dat/Acc] - V - PP[of]] : type (i)
II. [NP_1 [Nom] - V - PP[of]] : type (iii)
III. [NP_1 [Dat/Acc] - V - NP[Acc]] : type (i)
IV. [NP_1 [Nom] - V - NP[Acc]] : type (iii)
V. [NP_1 [Dat/Acc] - V - S[Fin]] : type (i/ii)
VI. [NP_1 [Nom] - V - S[Fin]] : type (iii)
VII. [NP_1 [Dat/Acc] - V - S[Nnf]] : type (i/ii)
VIII. [NP_1 [Nom] - V - S[Nnf] : type (iii)
IX. [NP_1 [Dat/Acc] - V - NP[Nom]] : type (ii)

5. Longen
IV. (?) [NP_1 [Nom] - V - NP[Acc]] : type (iii)
V. [NP_1 [Dat/Acc] - V - S[Fin]] : type (i/ii)
VII. [NP_1 [Dat/Acc] - V - S[Nnf]] : type (i/ii)
VIII. [NP_1 [Nom] - V - S[Nnf] : type (iii)

6. Listen
I. [NP_1 [Dat/Acc] - V - PP[of]] : type (i)
II. [NP_1 [Nom] - V - PP[of]] : type (iii)
III. (?) [NP_1 [Dat/Acc] - V - NP[Acc]] : type (i)
IV. [NP_1 [Nom] - V - NP[Acc]] : type (iii)
VII. [NP_1 [Dat/Acc] - V - S[Nnf]] : type (i/ii)
VIII. [NP_1 [Nom] - V - S[Nnf]] : type (iii)

In ME too, which particular category a verb can select varies according to whether it occurs in impersonal and personal constructions. For example, *reuen* does not have an accusative in the impersonal but does in the personal construction. *Longen* has a finite clause only in the non-nominative, not in the personal construction. Also, which particular category is selected varies according to different verbs. For example, PP[of] is found with *reuen, shamen, liken* and *listen*, but not with *eilen* and *longen*. S[Nnf] is found with *reuen, shamen, liken, longen* and *listen*, but not *eilen*.

Moreover, type (ii) of Fischer and van der Leek (1983) is not appropriate for all verbs above: no genuine example of type (ii) is found with *longen* and *listen*. Type (i) is not found for all impersonal verbs, either. For *eilen*, no impersonal construction is found. Type (iii) is now found for all these verbs, of course with some variation depending on what syntactic frames (i.e. which categories) they selects.

5. Diachronic account

Based on the corpus we used, the change of the syntactic frames of impersonal verbs between OE and ME is summarized as follows. The following tables show that different verbs historically develop along different lines and at a different pace:

(72)

1. *RUE*	Cont'd (OE to ME)	Disappear	Appear
Type i (impersonal)	I	III	*
Type ii (causative)	IX	*	*
Type i/ii	V	*	*
Type iii (personal)	II	*	IV, VIII

Not found: VI, VII.

2. *SHAME*	Cont'd (OE to ME)	Disappear	Appear
Type i (impersonal)	I	*	*
Type ii (causative)	IX	*	*
Type i/ii	V, VII	*	*
Type iii (personal)	II, VI	*	IV, VIII

Not found: III.

3. *AIL*	Cont'd (OE to ME)	Disappear	Appear
Type i (impersonal)	*	*	*
Type ii (causative)	IX	*	*
Type i/ii	*	V	*
Type iii (personal)	IV	*	*

Not found: I, II, III, VI, VII, VIII.

4. *LIKE*	Cont'd (OE to ME)	Disappear	Appear
Type i (impersonal)	I, III	*	*
Type ii (causative)	IX	*	*
Type i/ii	V, VII	*	*
Type iii (personal)	with PP(?)	*	II, IV, VI, VIII

5. *LONG*	Cont'd (OE to ME)	Disappear	Appear
Type i (impersonal)	*	I	*
Type ii (causative)	*	*	*
Type i/ii	*	*	V, VII
Type iii (personal)	*	*	IV(?), VIII

Not found: II, VI, IX.

6. *LIST*	Cont'd (OE to ME)	Disappear	Appear
Type i (impersonal)	I, III(?)	*	*
Type ii (causative)	*	*	*
Type i/ii	VII	V	*
Type iii (personal)	II, VIII	*	IV

Not found: VI, IX.

One reason for the different line of change is that each verb originally has different syntactic frames in earlier stage. *Ail* has not taken the genitive cause (or its descendent PP[of]) as its complement throughout its history, while the genitive cause (or PP[of]) was very common with the other verbs in both OE and ME. Similarly *ail* has not taken the nonfinte clause at all, while for the personal construction it was newly introduced to *rue*, *shame*, *like* and *long* and continuously used for *list*. Similarly, because *long* and *list* did not have a nominative cause (IX) in OE, it has no way to keep or lose that construction, while the other verbs keep that construction in ME and some of them lose it later.

The three syntactic types (impersonal, personal and causative) do not behave consistently in diachronic change in respect to all impersonal verbs above and all syntactic categories they select. For example, all the categories of type (i) which were used in OE continue to occur with *shame* and *like* in ME, but some categories of type (i) disappear with *rue*, *ail*, *long*

and *list* in ME. So, here we see the gradualness of disappearance of impersonal constructions across different verbs.

One notable phenomenon here is that the accusative cause is on the increasing line along with the increase of the personal construction. We see this from the fact that the accusative is getting lost in impersonal constructions (e.g. *rue*) but newly introduced (e.g. *rue, shame, like, long*(?), *list*) or continuously used (e.g. *ail*) in personal constructions. The finite clause is on the decreasing line in non-nominative constructions (type i/ii): it is completely lost in ME for *ail* and *list*.[27] In constrast, the nonfinite clause is on the increasing line along with the increase of the personal construction. Here, it seems that a new introduction of the nonfinite clause in the personal construction — with the increase of personal construction in general — is possible when at least a finite clause could occur with the verb at the same time or in an earlier stage.

Examining particular instantiations of impersonal verbs at two historical stages in the above nonetheless shows some trends between OE and ME. We cannot find any verbs and any categories that the verb selects for which a personal construction (type iii) disappears through time. A personal construction newly appears or at least continues from OE. As mentioned above, new appearance of personal construction is especially notable with regard to subtype IV (i.e. with the accusative cause) and VIII (i.e. with nonfinite cause). Conversely the impersonal construction (type i) in general follows a decreasing line: it disappears or continues from OE—of course with some variation across the syntactic frames.

The causative ,construction (IX) is intermediate between the two types. It generally continues to exist from OE if it was possible with a certain verb in OE. We find no new introduction or loss of the nominative cause construction in ME. In NE, causative meaning is still available for *ail* (e.g. *what ails him*) and *shame* (e.g. *His son's behavior shamed him very much*). But for the words like *rue, like* and *long*, only personal (receptive) meaning is used in NE. In this case, the fact that the nominative cause continuously existed from OE to ME suggests that impersonal constructions began to diminish earlier than causative constructions.[28] Its seems that the causative outlived the impersonal because the former satisfies a new syntactic constraint of English, that is that the nominative (subjective) case should be obligatory in a sentence and English is not a pro-drop language anymore.

6. Conclusion

This paper focused on how heterogeneous the syntactic distributions of the impersonal verbs are in each synchronic stage of OE and ME. Different impersonal verbs behave differently in terms of their occurrences in particular syntactic frames. Therefore, diachronic change of each verb also varies with regard to particular syntactic frames. The precise details of each syntactic frame may be subject to some revision with more

[27] An exception is *long* where it is developed. This can be interpreted in two ways: either in OE *long* had a finite clause in non-nominative constructions in OE and just the lack of data did not show it, or ME *long* later developed the finite clause in non-nominative constructions by analogy to other verbs before the other verbs began to lose finite clause in the same construction.

[28] The causative meaning 'to please' of the verb *like* is found until 19th c. as in the following example from OED:

I rode sullenly upon a certain path that liked me not. (Rossetti, Dante & Circ. (1874) I. 41)

The impersonal construction, comparatively, is not found in NE except in the highly fossilized or lexicalized expression such as *me thinks*, for rhetorical reasons.

consideration of new data. Our particularistic approach of this paper, however, proposes the following points:

i) Contrary to Fischer and van der Leek (1983), Anderson (1986) and Lightfoot (1991), the three syntactic types (i), (ii) and (iii) did not occur to all impersonal verbs. Furthermore Fischer and van der Leek (1983)'s representation of lexical entries is overgeneralized because no single verb exactly matches such lexical entries.
ii) Fischer and van der Leek (1983)'s account of the relations among three syntactic types by means of move-α is not accurate because the data show that the same verb selects different categories according to whether it occurs in impersonal or personal constructions.
iiii) A data-oriented approach to impersonal verbs shows how the change is gradual and how different verbs change along different lines. Divergent change is in part due to the divergence of the synchronic syntactic frames across the verbs in the previous stage.
iv) This also gives more dynamic accounts of historical change. We have found that in cases where the impersonal and causative constructions are now both obsolete in NE, the two types had undergone the decay at different time: the impersonal decayed earlier than the causative.

References

Anderson, J. 1986. A note on Old English impersonals. *Journal of Linguistics* 22: 167-177.

Belletti, A., and L. Rizzi. 1988. Psych-verbs and theta-theory. *Natural Language and Linguistic Theory* 6.3: 291-352.

BT = Bosworth, J., and T. Toller, eds. 1898, 1929, 1954, 1972. *An Anglo-Saxon dictionary*. Oxford University Press.

BTs = Teller, T., and A. Campbell, eds. 1921, 1955, 1966, 1972. *An Anglo-Saxon dictionary*, Supplement. Oxford University Press.

Denison, D. 1990. The Old English impersonals revived. In *Papers from the 5th International Conference on English Historical Linguistics*, ed. S. Adamson, V. Law, N. Vincent and S. Wright. Amsterdam/ Philadelphia: John Benjamins.

Denison, D. 1993. *English historical syntax*. London/New York: Longman.

Elmer, W. 1981. *Diachronic grammar: The history of Old and Middle English subjectless constructions*. Tübingen: Niemeyer.

Fischer, O., and F. van der Leek. 1983. The demise of the Old English impersonal construction. *Journal of Linguistics* 19: 337-368.

C = Healey, A., and R. Venezky. 1980. *A microfiche concordance to Old English: the list of texts and index of editions*. University of Toronto.

Janda, R. D., and B. D. Joseph. (1990 ms.) On constellation in morphology: Crosslinguistic evidence and modern Greek mi(n)(-).

Jespersen, O. 1909-49. *A modern English grammar on historical principles*, 7 vols. Heidelberg: Carl Winters Universitatsbuchhandlung/ Copenhagen: Ejnar Munksgaard.

Lightfoot, D. W. 1979. *Principles of diachronic syntax*. Cambridge University Press.

Lightfoot, D. W. 1991. *How to set parameters: Arguments from language change*. Cambridge, Mass.: MIT Press.

MED = Kurath, H, S., S. M. Kuhl. J. Reidy, R. E. Lewis et al., eds. 1952-. *Middle English dictionary*. Ann Arbor: University of Michigan Press.

OED = Murray, J. A. H. et al., eds. 1933. *The Oxford English dictionary*. 12 vols. Oxford: Clarendon.

Välimaa-Blum, R. 1988. Finnish word order as a set of syntactic constructions. *ESCOL '88*: 500-511.

Visser, F. Th. 1963. *An historical syntax of the English language*, vol. I. Leiden: Brill.

73

BEST COPY AVAILABLE

OSU Working Papers in Linguistics 46.63-85

The Emergence of Creole Copulas: Evidence from Belize Creole[1]

Bettina Migge

0. Introduction

In recent discussions about the origin of Caribbean Creole grammars the copula systems of English lexified Caribbean Creoles have figured prominently since they are organizationally clearly distinct from those of their European lexifier and are thus a possible example of substrate and universal influences on Creole formation. In Creoles different copula environments typically employ distinct copulas. In (1) the four copula schemata for natural languages are exemplified with examples from Belize Creole (BC)

(1) ***Examples from Belize Creole***

1	NP+(Cop)+NP	*equative*[2]	(a) da kaaf *da* i bol kaaf. 'That calf is his bull calf'
			(b) dɛ̃ *da* big sneks. 'They are big snakes'
2	NP+(Cop)+POSS	*possessive*	dis hol pis a laan *da* fo yu? 'This whole piece of land is yours'
3	NP+(Cop)+ADJ	*attributive*	de pus dɛ̃ *e* ʃap. 'Those cats are intelligent
4	NP+(Cop)+LOC	*locative*	di oldes gyal *de* da kamalɔt. 'The oldest girl is at Camalotte'
5	NP+(COP)	*existential*	no wee els *de*. 'There isn't another way'

---

[1] I'd like to thank Donald Winford for making the recordings of BC available to me.

[2] Equative constructions can be subdivided into (a) *identificational* and (b) *attributive* constructions. Some languages such as SM and SN employ differentiate between these constructions while others such as BC, GC and JC do not.

The examples in (1) show that equative (1.1) and locative (1.4) constructions use distinct copulas while possessive (1.2) and existential (1.5) constructions involve the same copula as equative and locative constructions respectively, and adjectival construction (1.3) do not involve a copula element at all.

Recent research on the copula domain has proposed two different scenarios of the emergence and development of the Creole copulas da and de based on research on the Surinamese Creoles, namely Sranan (SN) (Arends, 1989) and Saramaccan (SM) (McWhorter 1993). Arends (1989) traces the development of the copulas da and de in SN using historical data covering a period of roughly 300 years from 1650 to 1950. His analysis suggests that early SN did not employ copulas in any of the four environments in (1). Shortly after its emergence, however, the copula de was reanalyzed from the locative adverb de 'there' in predicative locative environments and the nominal copula da developed from the focus marker da functioning as a resumptive in topic-comment constructions. Subsequent to its establishment in locative and existential constructions, the copula de spread to certain adjectival, possessive and nominal environments. In the nominal domain de eventually replaced da in descriptive environments involving an indefinite NP complement and in tensed and negative identificational constructions. de's establishment in descriptive environments led to the restriction of da to present identificational constructions. Concerning the emergence and development of the SN copulas de and da, Arends (1989) maintains that they are the result of substrate calquing partly reinforced by universal tendencies.

McWhorter (1993) examines the emergence of the copulas da and de in SM using elicited synchronic and diachronic data. Like Arends, he posits a stage in which copula absence was the norm in all four copula environments. Contrary to Arends, however, he maintains that subsequent to de's establishment in locative environments it spread to equative, possessive, existential and certain adjectival contexts and became established there also. He posits a third stage in which the copula da was reanalyzed as an identificational copula from the non-verbal demonstrative da functioning as a resumptive pronoun in topic-comment constructions. da thus replaced de in this function. McWhorter (1993) maintains that the emergence of da and de in SM and by extension in other Creoles is the result of language internal developments. He rejects any impact of substrate influence.

The aim of the present study is to provide further evidence in support of Arends' scenario of the emergence and development of the Caribbean English Creole (CEC) copulas da and de using natural synchronic data from BC.

The BC copula system was chosen for this analysis since its copulas da and de are not as far along in the process of reanalysis as they are in other CECs such as SN and SM. Their hybrid character in BC may shed some light on the processes involved in their emergence and development.

The paper is organized as follows. Part one presents the findings from a quantitative analysis of copula occurrence in the data to give a reliable insight into the overall syntactic and semantic organization of the BC copula domain. Part two and three present a descriptive analysis of the function and status of da and de respectively in the data in an attempt to shed light on the emergence and development of their copula function in BC. Part four compares the organization of the copula domain in BC to that of a few of its substrate languages in order to show the close correspondences between them. Part five summarizes the findings and proposes an account of the development of the two Creole copulas.

1. Quantitative Analysis of Copula Occurrence in the BC Data

The data for this study was collected by Donald Winford in 1992 in a rural community in Central Belize, some thirty miles from Belize City. It consists of recordings of natural, spontaneous conversations from seven speakers. Table 1 summarizes the age and gender of the participants.

Table 1. Gender and Age of the Participants in the Spontaneous Conversations

PERSON	GENDER	AGE
Ms M	F	65
Ms B	F	84
R. J	M	40
A. H	M	30
S B	M	50
R. Y	M	63
H. W	M	63

All participants are natives of that community and have been living their for the greater part of their lives and with the exception of the field worker (A. H.) who is a teacher, all other participants follow occupations typical for rural Belize such as farmer, seamstress, chiclero, trapper and hunter.

The data yielded a total of 961 present and past copula tokens involving the copula variants da, de, the forms of be and copula absence. Examples involving these variants in present and past nominal (NP), locative (LOC) and adjectival (ADJ) environments are given in (2) and (3) respectively.

(2) ***Examples of Present Copula Constructions in the Data***

NP

1. di lil boy *da* di senta de. 'The little boy is the focus of attention there.'
2. di man *da* akomplIʃ medəzin man. 'The man is an accomplished medicine man.'
3. da man *ɛ* wã lil, lil pIknea. 'That man is a little, little child.'
4. di nem *iz* setl wed baŋ, nɔ tru? 'The name is Settle Wade Bank, isn't it?'

5 ɪf yu wan get ap ten oklok dat *da* fo yu bisnes. 'If you want to get up at ten o'clock, that's your business.'

__ADJ

1 ay no, de pus dɛ̃ *ɹ* ʃap.'I know, the cats are intelligent.'

2 ɛvrɪtɪŋ *ɪz* fain. 'Everything is fine.'

__LOC

1 de maʃɪnari *de* up ya. 'The machinery is up there.'

2 wee paat ɪ *dɔ* 'where is she?'

3 hɪ an mɪsɪs lus *ɹ* de. 'He and Mrs Luce are there.'

4 ɪ se, wee E Z *ɹ*? 'Where is E Z?'

5 ɪf yu wan anɪtɪŋ, dɪ komisær *ɪz* de. 'If you want anything, the comissaire is there.'

6 no wee els *de*. 'there isn't another way.'

7 der*z* a ples fo yu tu. 'There is a possibility for you to make money here too.'

(3) ***Examples of Past Copula Constructions in the Data***

__NP

1 bifo ɪ stap workɪn, ɪ *ɹ* plesan bwai. 'Before he stopped working he was a nice guy.'

2 a juuzta soo fi den wen ɪ *da* lɪ bwai. 'I used to sew for them when he was a little boy.'

3 A bat V *da* mɪ dɪ breensman bat B hi *da* man layk ʃoo af. 'but V was the brainsman but B liked to show off, he still likes to show off.'

4 dɪ man *waz* a veri god man tɔ dɪ kampani.'The man was a very good man to the company.'

5 *da* kampani namba wan man. 'It was the number one man in the company.'

6 yes man, ɪ [the power saw] flay bak, A se. an ɪ gaan rayt ap layk wã bulet an ɪ gaan fastn ap ena wã bredna kratʃ ap de, bat hay. an de no faal dɪ bredna bekaaz dɪ bredna bɪg. ... wat, mahagɲi wak *da* neva dʒok, da dʒok atal man.' Yes, man, it flew back, A said and it went right up like a bullet and it fastened up in a brednut tree crutch up there, but high. And they didn't fell the breadnut because the breadnut was too big what, mahogany work wasn't a joke, it wasn't a joke at all.'

__ADJ

1 so dende taym tɪŋ*z* *wɛr* brayta dan nou. 'At that time, things were brighter than now.'

2 tɪŋ *waz* tʃɪap, do*z* taym tʃɪap, tɪŋ *waz* tʃɪap. 'Things were cheap, those times were cheap, tings were cheap.'

3 bat dɛ̃ no noo dɪ man *ɹ* krezi.'But they didn't know the man was crazy.'

4 aprɪl 15th a *waz* 64 'On aprɪl 15th I was 64.'

' It had been established in previous discourse that the man had died.

5 an we gaan, wen a get a luk pan di man yu no waan mek dis, but nou i behev ruud yeno, i staata kos. so mista W , laad, i no no wee fi do wid i self di we hau i ø sad fi sii hau i breda... 'and we went [to see him] When I got to look at the man, you couldn't believe this, but now he behaved rude, you know, he started to cuss so Mr W , Lord, he didn't know what to do with himself the way he was so sad to see how his brother '

6 bekaaz dat da dis yea ay *mi ø* pregnan wid yu. 'Because that was the year I was pregnant with you '

LOC

1 A a tel ā [police] wee hapan, i se a gwain wid yu an wen we get de me an hi an S , i neva tek no taim fo fayn de skin. 'A told him what happened and he said I am going with you and when we got there, me and him and S , he didn't take long to find the skin '

B o yu bran *di* de[3] 'Oh, the brand was there'

2 yes di tuu a wi bran *di* de fo me bran ø de and S bran. 'Yes both our brands were there, my brand was there and S brand '

3 yu no di ada dee ant F *mi ø* de. 'The other day aunt F was there '

4 J *mi de* aut de yestadee tuu. 'J was out there yesterday too '

5 da gyal *waz* rayt ena da yaad de. 'That girls was right there in that yard '

6 yea, a fraytn beka a di luk fo samtin we a no no we paat i *de*. 'Yeah, I was frightened because I was looking for something which I didn't know where it was '

7 A ... P P go rayt ena i haus, rayt de nau da pjua aldrin, i mi gat fra wen yu mi kuda get a, sprinkl a rayt pan i ziilin, an i go baut i bisnes, no wā wom nit P P haus. B an no baad no *de* ena de. 'A P P went right in his house, right there was pure aldrin, he had it from when you were still able to get it, he sprinkled it right on the ceiling, and he went about his business and no worm ate P P 's house. B And there wasn't anything in there"

In the analysis the equative category includes both descriptive and identificational environments. Possessive and cleft constructions have also been included among nominal environments since they involve the same variants and similar patterns of variability. The locative category includes both locative and existential tokens. Tables (2) and (3) present the percentage distribution and corresponding number of tokens for each copula variant in present and past environments by the following grammatical environment.

Table 2: Distribution of the Four Present Copula Variants by the Following Grammatical Environment

	de	da	ø	be	TOTAL
NP	--	83% (250)	5% (14)	12% (37)	301
ADJ	--	--	90% (140)	10% (14)	154
LOC	62% (53)	--	32% (28)	6% (5)	86
TOTAL	9% (53)	47% (250)	34% (182)	10% (56)	541

BEST COPY AVAILABLE

Table 3.: Distribution of the Four Past Copula Variants by the Following Grammatical Environment

	de[a]	da[a]	ø[a]	be[b]	TOTAL
NP	--	88% (149)	4% (6)	8% (14)	169
ADJ	--	--	82% (63)	18% (14)	77
LOC	69% (120)	--	27% (47)	4% (7)	174
TOTAL	29% (120)	35% (149)	28% (116)	8% (35)	420

a This factor includes tokens modified by mi and those unmodified by mi

b This factor includes past and present forms of be

The quantitative analysis of copula occurrence in the BC basilect reveals a typical CEC copula system in which each environment employs a distinct variant. Equative environments involve the variant da, locative environments involve the variant de and in predicative adjectival environments copula absence is categorial. The categorial absence of copulas preceding predicative adjectives suggests that predicative adjectives have verbal status in BC. This analysis is confirmed by the examples in (4) which illustrate their behavior with respect to tense, aspect, and negation markers. Like regular verbs - see the examples in (5) - predicative adjectives in BC can be directly modified by the relative past marker mi, the negation marker no and the modal mosi.

(4.1) ***Predicative Adjectives +Tense***
di kou-dē *mi* tem.
the cow-PL PAST tame
'The cows were tame.'

(4.2) ***Predicative Adjectives + Modal***
di bwai *mosi* big.
the boy MOD big
'The boy is very likely big.' (Young, 1973: 260)

(4.3) ***Predicative Adjectives + Negation***
if yu kil a, di ratl *no* gud.
if you kill it, the rattle snake NEG good
'If you kill it, the rattle snake isn't be any good.'

(5.1) ***Verbs + Tense***
a *wa* giv unu wâ djok.
I FUT give you-pl a joke
'I will tell you all a joke.'

(5.2) ***Verbs + Tense/Aspect***
me an M *mi di* plan bat ʃi *no* fiil gud.
me and M PAST PROG plan but she NEG feel good
'I and M had been planning this but then she didn't feel well.'

The quantitative analysis (see tables 2 and 3) demonstrates that all environments involve marginal patterns of variation. The forms of be in all three environments are the result of code-switching[4] with Standard Belize English. The alternation between da and copula absence and de and copula absence in nominal and locative environments respectively represents system inherent variation. Following the assumption that synchronic patterns of intra-systemic variation in language use are the result of diachronic change, it seems plausible to assume that the instances of copula absence in equative and locative environments represent relics of an earlier stage of BC in which copula absence was the norm in these environments.

2. A Functional Analysis of da in the Data

This section investigates the syntactic and semantic status of da with a view to determining how da came to be established in its equative copula function.

Examples (6) to (10) list all the functions of da in the data.

(6) ***Demonstrative Determiner da(t)***

1 *da* bukut lif da fi trowe. 'That bukut leaf is for throwing away.'

2 *da* tiŋ da lon boʃ. 'That place is pure bush.'

(7) ***Demonstrative Pronoun da(t)***

1 rain but wi bat *da* no stop wi. 'Rain was pouring but that didn't stop us.'

2 *dat* min yu kud kip tu a den. 'That means you could keep two of them.'

3 so yu no wan lus *dat*. 'So you don't want to lose that.'

(8) ***Locational and Directional Preposition da***

1 a gaan *da* skuul *da* limonal [...] a neva gat no trabl *da* limonal. 'I went to school in Limonal [...] (and) I never had any trouble in Limonal.'

2 da mahɔgani gaan haya dan dis payn tri gaan wadʒ isef ina wã kratʃ *da* tap de. 'That mahogany tree went higher than this pine tree and wedged itself into a crutch at the top there/on top there.'

3 wi travl ina do ri go *da* joŋ baŋ. 'We travelled in a lorry to Young's Bank.'

4 ay get ap *da* maanin. 'I get up in the morning.'

(9) ***Presentative/Focus da***

1 *da* vali da di breynsman. 'It isValli (who) was the intelligent one.'

2 *da* ɔpn savana. 'That is open savanna.'

3 *da* tu de kil. 'It's two they killed.'

(10) ***Copula da***

1 da snek *da* ratl snek. 'That snake is a rattle snake.'

2 mi *da* di neks wan we i wã kil. 'I am the next one he wants to kill.'

3 Ol ma Reesi - wi *da* fas kasin. 'Old ma Reesi - we are first cousions.'

4 a neva no you *da* mi oparata bek de. 'I never knew you were an operator then.'

5 dat *da* no fo di smaal fama. 'That [loan] is not for the small farmers.'

---

[4] This conclusion was reached by a study investigating copula variability in two speech styles in the same community (See Migge 1994a).

In its demonstrative function da deictically identifies a referent. When functioning as a locational or directional preposition da locates an activity, state or entity in space. As a focus marker da singles out an entity or property from a closed set of possibilities and in its equative copula function da expresses association between the referent of its complement and its subject.

Examples (6) to (10) clearly illustrate that da is a hybrid form in BC. As is typically the case with hybrid forms, da resists categorial linguistic classification since it embraces the properties of several morpheme classes. According to Heine, Claudi and Hunnemeyer (1991: 231) hybrid forms like da constitute a grammaticalization chain with its status ranging from more deictic to more predicational. Grammaticalization chains "are found at the intersection of overlapping stages of the 'no longer quite X but not yet quite Y type'". Viewed in this way, grammaticalization chains "reflect linguistically what has happened on the way from more 'concrete' to more 'abstract' contents, and they make it possible to reconstruct that process" (Heine, Claudi & Huennemeyer 1991: 231).

Devonish and Pochard (1986) suggest that the demonstrative function of da represents the source concept of da's grammaticalization chain since "the predominant deictic meaning in the demonstratives may be what is shared to varying degrees by the other manifestations of a and da [...] in the language" (111). Since da's copula function, however, is closely related to its focus function this section mainly focuses on these two functions of da and their relationship to each other and its demonstrative function.

3. 1. Focus da

Both the fact that the focus marker da and the demonstrative pronoun da show formal identity and have a deixis function suggest that the focus/topicalizer function of da illustrated in (9) is directly related to the demonstrative function of da. In focus or cleft constructions da occurs sentence or clause initially and directly precedes the focused constituent which is moved to the front of the sentence in the case of object NPs and PPs and copied to the front of the sentence in the case of Vs. Examples (11) through (17) illustrate the types of constituents which can be focused by da in BC.

(11) *da + Subject NP*

A so di man titi yu wã lat baut dis medisin? 'So, the man taught you a lot about this medicine?'

B yes man, *de* he tell mi baut dis medisin eno.
yes man, FOC he tell me about this medicine you-know
'Yes man, it was he who told me about this medicine.'

I do not want to imply here that all of da's different uses in BC are necessarily the result of a BC internal process of grammaticalization in which a deictic pronoun 'that' developed in the direction of a predicator. It is equally likely that several of da's uses in BC were adopted from its substrate languages. To determine this additional data, particularly historical data, and data on its input languages is required.

81

(12) ***da + Object NP***

A ka mi da di neks wã we ɪ wã kɪl. 'Because I am the next one he will kill.'

B yu oon san? 'Your own son?'

A mi oon san, *da* mi i wã kɪl.
my own son, FOC me he want kill
'My own son, it's me he wants to kill.' (not someone else)

(13) ***da + PP***

ay no we-paat W R liv... so, *da* betwiin E M an W R we
I know where W R live so FOC between E M and W R where
di faal de.
the fall is
'I know where W R lives... so, it's between E M and W R where the fall is.'

(14) ***da + ADJ***

A yee meen! bat dende da mi kwalɪti pipl, man. [...] 'Yeah man! But they were quality people, man.'

B *da* truu dat, *da* truu dat.
FOC true that, FOC true that
'That's true, that's true.'

(15) ***da + ADV***

A we yu hafu do, yu hafu kip wã tuu a di ʃoat [...]. 'What you have to do, you have to keep one, two shoat [hogs].'

B *da* so we di bwai tɛl mi.
FOC so what the boy tell me
'It's this what the boy tells me.'

(16) ***da + WH-***

A beka fo we vilɛʒ kaunsil tʃeemen, wel is a tʃeeledi, bat ʃi no ibin de ya nou.
'Because our village council chairman, well it's a chairlady, but she isn't even here now.'

B *da* hu dat, man?
FOC who that man
'Who is that, man?'

(17) ***da + V***

da ple we ple sundee moonin, dan natin els.
FOC play we play sunday morning, done nothing else
'We played sunday mornings, we didn't do anything else.'

Examples (11) to (17) clearly demonstrate that the focus and demonstrative pronoun function of da are clearly distinct syntactically and functionally. Focus da functions as a predicator for a wide variety of constituents while demonstrative da deictically modifies nouns only. Focus da's behavior with respect to the placement of tense, aspect and negation markers illustrated in (18), however, suggests that focus da is derived from the non-verbal demonstrative pronoun da.

(18.1) ***Focus da + Tense***

A beka fo wi vilidʒ kaunsil tʃeeman, wel iz a tʃeeledi, bat ʃi no ibεn de ya nau.
'Because our village council chairman, well it's a chairlady, but she isn't even here now.'

B da hu dat?
'Who's that?'

A *da* *mi* Mrs K.
FOC PAST Mrs K
'It was Mrs K.'

(18.2) ***Focus da + Modal***

a no wā bwai B J., bat da da yaŋ bwai. *da*
I know a boy B J., but DEM COP young boy FOC
mos i san.
mos i san.
MOD his son
'I know a boy called B J., but it's a young boy. It must be his son.'

(18.3) ***Focus da + Negation***

A da mi sun gaan lod de?
'Is it my son who went to load there?'

B *da* *no* hi, da i neks kasin [...]
FOC NEG he, FOC his next cousin
'It's not him, it's his next cousin.'

Unlike other verbal items in BC, focus da is followed rather than preceded by the relative past marker mi, the modal mos and the negation marker no. This marked pattern is most likely a relic of da's non-verbal origin.

3. 2. Cleft Constructions in BC

The literature on cleft constructions suggests that they fall into at least two subgroups, so-called *contrastive clefts* and *emphatic clefts* also referred to as *unaccented-anaphoric-focus clefts*. The two types of cleft constructions are syntactically similar, however, differ in their function and intonation from each other. The examples in (19) illustrates contrastive cleft constructions.

(19.1) ***Contrastive Clefts***

A ... da wa yu got ena de? mit?
FOC what yu got in there? meat?
'*What* do you have in there?*Meat*?'

B *da* kastaad apl.
FOC custard apple
'It's a custard apple.' (not meat)

(19 2) a man catches sight of a 'black thing' in the forest and describes its properties wondering what it is

den	i	rialaɪz	*da*	wã	fiʃ.
then	he	realize	FOC	a	fish

'Then he realizes it's a fish' (not a snake, say)

In the contrastive cleft construction illustrated in (19) da singles out the referent of the XP following it from among a closed set of possibilities as the only one which qualifies as the correct answer to the question in (19 1) or as the only one which fits the particular description in (19 2). Thus, as a contrastive focus marker da signals contrastiveness, emphasis, and exhaustiveness (Declerck 1988: 227).

Emphatic da primarily indicates emphasis as illustrated in (20).

(20) ***Emphatic Cleft***

A	dat	da	mɪ	an Visente, hi da wã ol devɪl

'This was me and Vicente, he is an old devil.'

B	yea,	*da*	trabl	man.
	yeah	FOC	trouble	man

'Yeah, he is really a trouble maker.'

In (20) the NP following da does not represent new information. Here da merely emphatically reaffirms old information. In emphatic cleft constructions the foregrounded constituent is only weakly stressed. The data suggest that the contrastive focus function of da is much more wide-spread than its emphatic function.

The data also included cleft construction of the structure *da da XP* in which a dummy pronoun da precedes the focus marker da as shown in (21).

(21 1) ***da da XP Clefts in BC***

A	yee,	twelv	auaz	lang,	*da*	*da*	wã	brut	af	a	fiʃ.
	yeah,	twelve	hours	long	DEM	COP	one	brute	of	a	fish

'Yeah, twelve hours long, it's one brute of a fish.'

B	*da*	*da*	wã	bɪg	fiʃ [...]
	DEM	COP	one	big	fish

'It's a really big fish.'

(21 2) yu	sɪ	da	ledɪ	yonda	sɪt	daun	dɛ,	*da*	*da*	M
you	see	that	lady	there	sit	down	there	DEM	COP	M

'Do you see that lady over there who sits down there, it's M.'

Functionally, these constructions are similar to the *da XP* constructions, they can be used contrastively and emphatically. They are also roughly as common in the BC data as the *da XP* type presented above. Out of a total of 302 cleft tokens in the data 130 involved the *da da XP* type and 172 the *da XP* type.

3. 3. Focus da and Copula da

Arends assumes that the equative copula function of da in SN derived from the quasi resumptive function of focus da in topic-comment constructions. The hypothesized process of the emergence of the copula use of da is illustrated in (22)

(22) ***Hypothesis of the Development of Copula da***

(a)	[NP]	[da_{foc} + NP]	==>(b)	[NP]	[$da_{cop\text{-}nom}$]	[NP]
	TOPIC	COMMENT		SUBJECT	COP	PREDICATE

In stage (a) the topic consisting of an NP followed by a short pause directly precedes the comment which consists of a cleft construction involving contrastive da followed by an NP. Due to heavy usage, however, the contrastive stress pattern of the construction gets leveled and a process of semantic bleaching leads to the elimination of the contrastive aspect of da's semantics. Subsequently, the topic-comment structure is reanalyzed. In the resulting structure illustrated in (22b) the topic has been reinterpreted as a subject, the focus marker as a copula and the NP following da as a predicate.

Several facts suggest that the copula function of da in BC developed as hypothesized in (22). First, the recordings examined for this study include topic-comment constructions of the type hypothesized in (22a), see (23)

(23 1) ***Topic-Comment Constructions in the Data***

A yu no, ol H mi laik mi. ol H juuz tɔ kaal mi R [...]
'You know, old H liked me. Old H used to call me R.'

B H B, *da da* E W qrampa.
H B DEM COP E W grandfather
'Hasat Banner, that's/it's/he's E. W.'s grandfather.'

(23 2) ... da wã de mi hav fiftiin ratl pan i tel. de se,
' that one there had fifteen rattles on its tail. They say

di amaun a ratl we de qat pan di tel, *da da* di aqe.
the amount of rattles which they got on the tail DEM COP the age
'the amount of rattles which they have on the tail, it's their age.'

(23 3)
so de qaan de an ask di man if i kud qi dẽ lɔdʒin beka so moa a dẽ de behain de kam.
'So, they went there and asked the man if he could give them lodging because some more of them are coming behind them.'

bat di fɔs doori we kam, *da da* di krab doori.
but the first canoe which came, DEM COP the ??? canoe
'But the first canoe that came, it was the canoe with the food.'

(23 4) A da tri rait da fran de, *da* swiit krabo tu?
that tree right in front there, FOC sweet ??? too
'That tree right in front there, it's a sweet carbbo too?'

B yee swiit, de tri we yu si de.
'Yeah the tree which you see there is sweet.'

The examples above involve an NP - the topic - followed by a pause - indicated by the comma - and a clefted NP phrase - the comment. The majority of the topic-comment constructions in the data involve the *da da XP* cleft type in which the dummy pronoun da precedes the focus marker da since the *da XP* type cleft has come to be analyzed as a COP+NP structure in this environment.

Second, the copula and focus function of da are also functionally similar. Both function as predicators in BC. The only difference between the two being that focus da also acts as a dummy subject since XPs combining with focus da do not require a subject whereas those combining with copula da do. This suggests that in the process of reanalysis from the focus marker to the copula the pronominal nature of da was eliminated while the predicational function was retained.

Third, the two functions of da are further similar functionally in that they relate two entities. Focus da relates the referent of the XP following it to the topic and the copula relates the referent of the predicate to the referent of the subject. The only difference between the two functions is that focus da singles-out a particular element or a particular kind of information from a closed set of possibilities and proclaims it as the only relevant information about the topic whereas copula da only expresses association between two referents.

Fourth, copula da also shows the same behavior as focus da with respect to the placement of tense, aspect, and negation markers, see (24).

(24.1) ***Copula da + Tense***

hi	*da*	*mi*	pasta	da	limonal.
he	COP	PAST	pastor	at	Limonal

'He was the pastor at Limonal.'

(24.2) ***Copula da + Aspect***

Miri	*da*	*don*	wã	titʃa.
Mary	COP	RES	a	teacher

'Mary is already a teacher.' (Winford p.c.)

(24.3) ***Copula + Modal***

Jan	*da*	*mos*	wã	poolis.
Jan	COP	OBL	a	policeman

'Jan must be a policeman' (Winford p.c.)

(24.4) ***Copula da + Negation***

grampi	*da*	*no*	onli snek man ya.
Grampi	COP	NEG	only snake man here

'Grampy isn't the only snake man here.'

Unlike other predicates in BC, copula da is followed rather than preceded by tense, aspect, and negation markers. The most plausible explanation seems to be that copula da

inherited this post-verbal pattern from focus da. It represents a fossilized pattern, i.e. despite its functional similarity to verbs in BC copula da still lacks their morphological trappings. da's behavior with respect to tense, aspect and negation markers in BC partly contrasts with other varieties of CEC such as Jamaican Creole (JC) and Guyanese Creole (GC) in which da or its variant a can be preceded by the relative past marker en/bin as the examples in (25) illustrate.

(25) *a in JC and GC*

1 im *ena* wan priti gyal. (JC)
she PAST-COP one pretty girl
'She was a pretty girl.' (Alleyne 1980: 89)

2 jan *bina* di liida. (GC)
John PAST-COP the leader
'John was the leader.' (Winford 1993: 161)

Finally, the question remains why focus da was reanalyzed as an equative copula although it is not restricted to focusing NPs. The only possible explanation for this is that in the great majority of the cases focus da predicates NP constituents. This is exactly what the data suggests. Out of a total of 172 da XP tokens only 35 involve a non-NP complement while 137 involve a NP complement.

In the data the nominal copula use of da seems to be well established, however, and distinct from its focus use. As demonstrated in (26) copula da in BC occurs sentence medially between all types of NPs including possessive NPs (fo XP) while focus da is always found at the edge of the phrase followed also by non-NP constituents. Moreover, the complement of focus da is stressed while that of copula da is not.

(26) *da's Syntactic Frame*

1 mi da *di dʒentlman* 'I am the gentleman.'
2 da kaaf da *i bul kaaf* 'That calf is his bullcalf.'
3 mi da *lɛri* 'I am Larry.'
4 di man da mi *wã kreezi man*. 'The man was a crazy man.'
5 di man da mi *akomplif medsin man*. 'The man is an accomplished medicine man.'
6 dis kau *da fo mi*. 'This is my cow.'
7 a no no if da lit hɔd *da mi fo yu*. 'I didn't know if that little herd was yours.'
8 dis hol pis a laan *da fo yu*? 'This whole piece of land is yours?'

Last but not least something needs to be said about equative constructions involving copula absence. As the quantitative analysis shows, copula absence in equative constructions is marginal in the data. The examples itself do not allow any generalization other than that the appearance of copula absence in BC is not rule governed but appears to be random. (27) presents zero copula constructions in the data and (28) matches them with equivalent ones involving copulas.

BEST COPY AVAILABLE

(27) ***Copula Absence in Equative Constructions***

1 da man ø wã lit lii dʒokə. 'The man is a little joker.'

2 R. wait ø Ms W. 'R.'s wife is Ms W.'

3 befo i stap wɔkin, i ø plesan bwai. 'Before he stopped working, he was a pleasant person.'

4 mi ø no di tuul. 'I am not the tool.'

5 da hu ø fat man dis ya nau kam haŋ mi ap? 'Who is this man here now who is hugging me?'

6 da hu ø dat nau. 'Who is that now?'

(28) ***Equivalent Constructions Involving a Copula***

1 witʃ wã *da* dat. 'Which one is that.'

2 wat *da* unu teknik wen yu tʃɔp de tri? 'What's your technique when you cut the tree.'

3 yu *da* mi wã gud tʃitkl man. 'You were a good chiclero.'

4 aldrin *da* dedli poisn. 'Aldrin is a deadly poison.'

5 unu *da* paatna. 'You are partners.'

At this point it is not possible to determine da's behavior in sentence final position since the data did not include any sentences requiring a nominal copula in that position.

In summary, the analysis showed that the equative copula function of da derived from its focus function and that the two uses of da are functionally and syntactically distinct today.

3. A FUNCTIONAL ANALYSIS OF de IN THE DATA

Example (29) through (32) demonstrate that de is similarly multifunctional in BC as da.

(29) ***Locative Copula de***

1 i *de* da belmopan. 'He is at Belmopan.'

2 de matiralz *de* ɔp ya. 'The work materials are up here.'

3 tel mista hikittikrit we paat yu boyfren *de*. 'Tell Mr. Hikitikrit where your boyfriend is.'

4 evritin *de* ena da buk. 'Everything is in this book.'

(30) ***Existential de***

1 no wee els *de*. 'there isn't another way.'

2 dende taim no haiwee neva mi *de*. 'At that time there weren't any highways.'

(31) ***Demonstrative de***

1 wen a get bek *de*, da dʒimbo lagun... 'When I get back there, to Jimbo Lagoon...'

2 bot vali de rayt *de*. 'but Vally was right there.'

3 a lat a rabij mi di *de*. 'A lot of rubbish was there.'

4 da hu mi setl *de*? 'Who settled there?'

5 da tri rait da frant *de*, da swiit krabo tu? 'That tree right in front there, it's a sweet crabbo too?'

6 A F , da da ap da hil ban *de*. 'A F , it's up at Hill Bank there '

(32) ***Progressive/Habitual Auxiliary di***

1 di man *di* taak aal di taim. 'The man is talking all the time '

2 J *di* draiv wã greeda. 'J is still driving a grader '

3 i famili *di* triit mi so god. 'His family always treated me so well '

4 aal di botldē *di* rol baut ena blaad.' All the bottles were rolling around in blood '

In its locative copula function de relates the referent of the subject expression to a space referred to by de's complement When functioning as an existential copula de expresses the existence of an entity, its subject, and the demonstrative de identifies an entity or location And finally the auxiliary di which is already fairly distinct phonologically from the other three uses of de locates an entity in an action expressing the continuity or habituality of that action (Pochard and Devonish 1986) As in the case of da, de's polysemic nature suggests that it constitutes a grammaticalization chain of which de's demonstrative use is the source concept The analysis focuses on the relationship between locational de and copula de since copula de most likely developed out of this function

3. 1. Demonstrative de

The demonstrative de has two slightly different uses in BC, one is deictic and the other locational In its deictic use illustrated in (33) de functions as a postposed nominal modifier/demonstrative

(33 1) ***Deictic de***

de	dʒob	*de*	da	dendʒərus	wɔk.	
the	job	there	COP	dangerous	work	

'The job there [chiclero] is dangerous work '

(33 2) da	wã	*de*	mi	hav	fiftiin	ratl	pan	i	tel.
that	one	there	PAST	have	fifteen	rattles	on	his	tail

'That one there [snake] had fifteen rattles on its tail '

(33 3) da	big	gyal	waz	rait	ena	da	yaad	*de*:
that	big	girl	was	right	in	that	yard	there

'That big girl was right in that yard there '

Deictic de which is part of the NP can establish anaphoric reference to any kind of previously specified entity In contrast to deictic de locational de illustrated by the examples in (34) expresses that an entity or action is present in the location de anaphorically refers to Locational de is part of the VP and occurs sentence/clause finally However, as illustrated by (34 4) it can optionally be followed by a PP which specifies the location more precisely

83

BEST COPY AVAILABLE

(34.1) ***Locational de***

de	lit	bwat	da	di	senta	*de*
the	little	boy	COP	the	centre	there

'The boy is the centre there'

(34.2) yu da yu oon man bek *de*

you COP your own man back there

'You are your own man back there'

(34.3) a no no if da i hed gaan *de* o i teel.

I NEG know if FOC his head gone there or his tail

'I didn't know if it was his head that went there or his tail'

(34.4) wen de get bek *de* da dʒimbo lagun wepaat de man de

when they get back there to Jimbo Lagoon wherepart the man COP

'When they get back there to Jimbo Lagoon where the man was'

3. 2. Locational de and Copula de

The locational function of de in BC seems to have given rise to de's copula use. In (35) I present the hypothesized process of reanalysis.

(35) ***Hypothesis of the Development of Copula de***

(a)	[NP]	[de_{LOC} + (PP_{LOC})]	⟹	(b)	[NP]	[de_{COP}]	[PP_{LOC}]
	SUBJECT	PREDICATE			SUBJECT	COP	PREDICATE

(35) assumes that the locative copula de was reanalyzed from the locational use of de. Essentially, (35a) posits that BC passed through a stage in which locative predicates directly followed the subject and 'double locative' constructions involving the adverb de followed by a PP were acceptable. The structure in (35a) then underwent a process of rebracketing resulting in (35b) in which the locational adverb de functions as the locative copula and the PP as the locational predicate.

In support of (35) I present three pieces of evidence from the BC data. First, as demonstrated by the quantitative analysis roughly 30% of all the locative tokens in the data involve copula absence. Copula absence is most frequent preceding the locational adverb de. Out of a total of 86 locative copula tokens involving the locational adverb de as a complement 48 employ the copula de whereas 38 tokens show copula absence. Compared to locative constructions involving other kinds of locational complements, this rate of copula absence preceding locational de is rather high. Out of a total of 162 tokens with 'non-de' locational complements only 37 involve copula absence while 125 employ the copula de. Locative constructions involving copula absence are shown in (36).

(36.1) ***Copula Absence in Locative Constructions***

di	boot	ø	stil	da	Beliz
the	boat	COP	still	LOC	Belize

'The boat is still at Belize'

(36 2) aal di tʃɜtʃ da M mi *e* de.
all the church from M PAST COP there
'All the church (people) from M were there'

(36 3) J *e* aut de dat taim.
J COP out there that taim
'J was out there that time'

Second, the data includes locative constructions which involve a locative complement of the structure proposed in (35a)

(37 1) ***Copula Constructions with a de+PP Complement***
i hed de rayt *de* ena di museom *de*
his head COP right there in the museum there
'Its (the snakes) head is right there in the museum there'

(37 2) de an mi brada mi de ratt *de* gens di waal.
they and my brother PAST COP right there against the wall
'They and my brother were right there against the wall'

Third, semantically, de in its locational function is a likely choice for a reanalysis to a locative copula since it is semantically relatively unspecified. In clause final position locational de essentially states that the referent of the subject is present in the location it anaphorically refers to. Its dependency on a locational referent makes it highly ambiguous in discourse and therefore requires specification by juxtaposing an optional PP following it. Since a PP was probably frequently juxtaposed to locational de in predicative locative constructions, de's locational semantics got bleached leading to a situation in which de no longer functions as a locational anaphora but simply expresses the presence of the subject in the location specified by the PP. The process of reanalysis to a copula was completed when de started taking adverbial complements like de 'there' and ya 'here' as illustrated in (38) and (39).

(38) ***de + de Constructions***
di tu a we bran *di* *de*
the two of our brands COP there
'Our two brands were there'

(39) ***de + ya Constructions***
onli mi *de* *ya*.
only I COP here
'Only I was here'

As shown in (40) the locative copula de is regularly preceded by tense, aspect and negation markers.

91

(40 1) ***Tense + de***

juni *mi* *de* aut de.
Juni PAST COP out there
'Junie was out there'

(40 2) ***Aspect + de***

wã big fat ledi *yuuztu* *de* doŋ de.
one big fat lady PASTHAB COP down there
'A big fat lady used to live down there'

(40 3) ***Negation + de***

ʃi *no* *de* ya.
she NEG COP here
'She is not here'

This is surprising given de's non-verbal origin. However, when considering the examples in (41) which involve copula absence and locational de as the predicate, copula de's behavior with respect to tense, aspect and negation markers becomes less odd.

(41 1) ***Tense + Adv de***

yu no, di ada dee ant F *mi a* de.
you know the other day aunt F PAST there
'The other day aunt F was there'

(41 2) ***Negation + Adv de***

da taim di gyal *no a* de.
that time the girl NEG there
'That time the girl was not there'

The examples in (41) suggest that copula de's 'regular' behavior with respect to the placement of tense, aspect and negation markers is the result of the fact that adverbial de, contrary to da, is part of the VP and was thus always, by the nature of its position within the clause, preceded by temporal and negation auxiliaries. Therefore the pattern illustrated in (40) is just a continuation of its pre-reanalysis pattern.

Copula de can also occur sentence finally in BC as illustrated in (42).

(42 1) ***Copula de Occurring Sentence Finally***

i ʃo mi we di dia *de*.
he show me where the deer COP
'He showed me where the deer is'

(42 2) tel mistaH we paat yu bwaifren *de*.
tell Mr H which part your boyfriend COP
'Tell Mr H where your boyfriend is'

92

In the sentences in (42) de is not followed by a complement. Again it seems plausible to assume that copula de's sentence final occurrence is due to the fact that adverbial de is generally the final constituent of the verb phrase.

As illustrated above, de is also used as an existential copula and as a progressive marker. The spread of the locative copula to cover these functions might have been induced by universal patterns since a relationship between these functions has been attested in a great number of languages. But since these functions are also related in some of BC's substrate languages, such as the Kwa languages Ewe, Fon, it seems most plausible to assume that de's spread to these functions was prompted by substrate patterns[3].

This section showed that the locative copula de derived from the locational adverb de and that the two uses of de are distinct in contemporary BC.

4. THE 'COPULA DOMAIN' IN THE SUBSTRATE

Finally, the question still remains why BC and other Caribbean Creoles developed similar rather fine-grained copula domains. When considering examples (43) through (45) which illustrate the extended copula domain of a few of BC's and other CEC's substrate languages, namely the Kwa languages Ewe, Fon and Akan, it becomes obvious that their copula domain is similar to that of its substrate languages.

(43.1) ***The Copula Domain in Akan***[1]

	me	*yɛ*	ɔtʃletʃleni[2]	*class membership*
	I	COP	teacher	
	'I am a teacher.'			
(43.2)	*ɛ-yɛ*	Kwadow		*focus*
	it-COP	Kwadow		
	'It is Kwadow.'			
(43.3)	Kwasi	*nɛ*[2]	ɔsɔfoɔ.	*identity*
	Kwasi	COP	priest	
	'Kwasi is the priest.'			
(43.4)	sukuu	no	*wɔ*	Kumase *locative*
	school	the	COP	Kumase
	'The school is at Kumase.'			
(43.5)	nnipa	no	*wɔ*	me *possession*
	people	the	COP	me
	'The people are mine.'			
(43.6)	na	*ɛ-wɔ*	ase.	*existential*
	FOC	it-COP	reason	
	'There is a reason (for that).'			

[1] Migge (forthcoming)
[2] Examples are from Boadi 1969 and an Ashanti informant.
[3] Tone marks were left out for all examples.
[4] ne seems to be a combination out of na 'focus marker' and yɛ 'be'.

(43 7) wɔ́ *ɲɔ́-tóó* bɔ́ɔ́l nɔ́. *progressive*
you(sg)PROG-throw ball the
'You are throwing the ball.'

(44 1) ***The Copula Domain in Fon***[1] *class membership*
sunu elɔ́ *nyɪ́ ɔ̀n*[1] mesi.
man this COP teacher
'This man is a teacher.'
(44 2) elɔ́ ɔ́ *nyɪ́* məlikun tɔn *identity*
this DET COP rice 3 per sg poss
'This is his rice.'
(44 3) kutɔnu wɛ́ nyɪ́ tɔ́ dàxó bɛnɪn tɔn. *focus*
Kotonu it-COP COP town big Benin poss
'It is Kotonu which is the biggest town of Benin.'
(44 4) wema lɛ *nyɪ́* towe *possessive*
book pl COP 2 per sg poss
'The books are yours.'
(44 5) glesi ɔ́ *dò* glɛ̀ ta. *locative*
farmer DET COP field head
'The farmer is on the field.'
(44 6) atinsinsen qeqe *dò ɪ̀ɪ̀n*[2] ɖ' axɛ mɛ. *existential*
fruit many COP LOC market in
'There are many fruits on the market.'

(45 1) ***The Copula Domain in Ewe***[3] *class membership*
ɛ *nyɛ́* ŋutsu.
he COP man
'He is a man.'
(45 2) ɛ *nyɛ́* fia la *identity*
he COP chief the
'He is the chief.'
(45 3) xɔ́ la ɛ *nyɛ́* nuá tɔ́ *possessive*
house the I COP me 1 per sg poss
'The house is mine.'
(45 4) xɔ́ ɛ *focus*
house it is
'it is a house.'

[1] Examples are from Hoffmann 1993.
[2] *nyɪ́* 'be' can be replaced by *ɪ̀ɔ̀n* 'become' if its complement is a profession.
[2] To stress 'existence' *dò* is replaces by *ɪ̀ɪ̀n*.
[3] Examples are from Westermann 1961.

9.4

(45.5) e *le* xɔ me. *locative*
it COP house in
'It is in the house'

(45.6) ga *le* afime. *existential*[14]
money COP there
'There is money there'

(45.7) me-*le* yiyim' *progressive*
1-PROG going
'I am going'

Like BC, all three substrate languages distinguish equative and locative constructions. Akan also distinguishes identificational NP complements from class-membership NP complements within the equative category. Akan and Fon also employ similar copula elements in equative and focus constructions. In Ewe the postposed focus element -e in (45.4) shows formal identity with the demonstrative pronoun. Like BC, Fon and Ewe also employ the same copula element in nominal and possessive constructions. Akan, on the contrary employs the locative copula in possessive constructions like the Surinamese Creoles. The great number of correspondence in the copula domain between BC and other CECs on the one hand and their substrate languages on the other suggest that the BC copula domain and by extension that of other CECs represent a calque on substrate patterns.

5. CONCLUSION: DEVELOPMENT OF CREOLE COPULAS

In (46) I give a summary overview of the development of the nominal and locative copulas *da* and *de* on the basis of the presented evidence from BC and evidence given in the literature from other Creoles.

(46) *Hypothesized Process of the Development of the Creole Copulas* <u>*da*</u> *and* <u>*de*</u>

Nominal	*Locative*
- ø copula stage which had topic-comment constructions of the form	**- ø copula stage which had locative constructions of the form**
[NP] [$\underline{da}_{cop}$ + NP]	**[NP] [$\underline{de}_{cop}$ + (PP_{loc})]**
TOPIC COMMENT	**SUBJECT PREDICATE**
- leveling of contrastive stress pattern and and loss of contrastive semantics	**- reduction of pause between subj ADV <u>de</u> and ADV loses anaphoric value**
- reanalysis to [NP] [$\underline{da}_{cop,nom}$] [NP]	**- reanalysis to [NP] [$\underline{de}_{cop,loc}$] [PP_{loc}]**
SUBJ COP PREDICATE	**SUBJ COP PRED**
due to substrate patterns	
- establishes itself as a nominal copula	**- establishes itself as a locative copula**
- adaptation to new morpheme class	**- adaptation to new morpheme class**
- further diachronic change	**- further diachronic change**
- phonological change	**- phonological change**

[14] It is not entirely sure whether this is truely an existenal sentence.

The proposed account in (46) is at variance with McWhorter (1993) with respect to several points. First, it assumes that Caribbean English Creoles did not emerge with one across-the-board copula de but with two distinct copulas, one in nominal environments, da, and one in locative environments, de. Second, the nominal copula da derives from da's focus function and not from its demonstrative function. Third, the locative copula de was reanalyzed from the locational adverb de, not from the (emphatic) nominal modifier de. Fourth, the emergence of the copula function of both da and de was prompted by substrate patterns.

REFERENCES

Arends, J. 1989. Syntactic developments in Sranan. Katholieke Universiteit te Nijmegen dissertation.

Ellis, J., and Boadi, L. 1969. 'To be' in Twi. The verb 'be' and its synonyms: Philosophical and grammatical studies, ed. by J. Verhaar, 1-71. Dordrecht.

Escure, G. 1985. The Belizean copula. A case of semantic shift. Dialogue. An interdisciplinary approach, ed. by M. Dascal, 265-81. Amsterdam/Philadelphia.

---. 1993. Focus, Topic particles and discourse markers in the Belizean Creole continuum. Focus and grammatical relations in Creole languages, ed. by Francis Byrne and Donald Winford, 233-49. Amsterdam: John Benjamins.

Heine, B., Claudi, U. and Hunnemeyer, F. 1991. Grammaticalization. A Conceptual Framework. Chicago: Chicago University press.

Hopper, P. and Traugott, E. 1993. Grammaticalization. Cambridge: Cambridge University press.

Hoffmann, H. 1993. Grammatik des Fon. Leipzig: Langenscheidt.

Luo, C. 1990. Cross-categorial formal identity. A functional account. University of Manitoba, ms.

McWhorter, J. 1993. Towards a new model of genesis. Competing processes in the birth of Saramaccan Creole. Stanford University dissertation.

Pochard, J.-C. and Devonish, H. 1986. Deixis in Caribbean English-lexicon Creole. Lingua 69: 105-20.

Welmers, W. 1973. African language structure. Berkeley.

Westermann, D. 1961. Die Ewe-Sprache in Togo. Berlin.

Winford, D. 1993. Predication in Caribbean English Creoles. Amsterdam: John Benjamins.

OSU Working Papers in Linguistics 46.86-114

The Diachronic Fragmentation of Modal *by* in Ukrainian*

Halyna Sydorenko

1. Introduction

In this paper I am concerned with a number of changes that brought about the fragmentation of the Ukrainian modal element *by* in its development from Old East Slavic to Modern Ukrainian as the marker of the subjunctive mood.[1,2,3] Although the discussion is focused on the diachrony of modal *by*, I first present a review of the synchronic analysis of *by* in sections (4) and (5) in order to lay a foundation for the diachronic developments in question. A detailed treatment of modal *by* (both synchronic and diachronic) makes up one of two case studies in my dissertation *The Atypical Morpheme: Two Case Studies from Ukrainian*.

---

* My thanks go to my advisor, Prof. Brian Joseph, for his encouragement of my work on the modal element *by* in Ukrainian. It was Prof. Joseph who first introduced me to the notion of diachronic fragmentation, as well as to the related synchronic concept of the morphological constellation. A version of this paper was read at the Annual Meeting of the American Association of Teachers of Slavic and East European Languages in San Diego (December 1994). I am grateful to all who provided comments at that time.

1. Ukrainian belongs to the Slavic family of languages. It is grouped within the branch of East Slavic, along with Belarusian and Russian.

In Old East Slavic the element *by* could be found in the following two contexts: non-indicative structures of the type 'if..., then...' and non-indicative complements of certain verbs of emotion. However, it is important to point out that both of these occurrences of the modal element *by* were one and the same. In other words, they both represented instances of nothing but a single morpheme. In contrast, the same cannot be said of the element *by* in Modern Ukrainian. In fact, I have previously argued (Sydorenko 1993) that the various occurrences of the element *by* in Modern Ukrainian are not one and the same. Altogether I propose that there are five distinct *by*-elements, distinguished by their function as well as by their formal properties. The synchronic situation suggests that the five *by*-elements create a grouping of similar-but-distinct elements. In morphological theory this concept is known as the morphological constellation (Janda and Joseph 1986, 1990 and Joseph and Janda 1988).

Since morphological constellations represent the workings of centuries of change, what is of interest is the process of diachronic fragmentation by which the unitary *by*-phenomenon of Old East Slavic became diversified over time. This process involved a number of distinct developments. The two most important ones are as follows: the morpholexicalization of the emotive attitude and the development of the emotive complementizer *ščob(y)*, a conjunction which introduces emotive clauses after verbs of emotive attitude (section 6.1.2);[4] the degrammaticalization and semantic bleaching of *by* and the development of the comparative-simile complementizers *niby*, *(ne)mov (by)* and *(ne)nače (b(y))* in clauses of similitude (section 6.1.3).[5,6,7] Also important is an example

---

2. Old East Slavic defines a period of time when there was a relatively high degree of unity amongst the linguistic varieties that gave rise to the three East Slavic languages of today, Ukrainian, Belarusian and Russian. Old East Slavic is chronologized from between the 11-13c.

3. In the tradition of Slavic linguistics any non-indicative mood, excluding the imperative, is generally referred to as the conditional. However, following Noonan (1985), I use the term subjunctive as a general designation for any non-indicative non-imperative mood. More specific terminology is used as needed, e.g. conditional (or conditional-subjunctive), emotive attitude, injunctive, evidential, etc.

4. Based on the way that it is written, it is implied that the form *ščob(y)* represents two possible variants, *ščob* and *ščoby*. The details of this are discussed in sections (5) and (6).

5. Both *(ne)mov* and *(ne)nače* may occur with or without the prefix *ne-*. Either way, the two expressions are synonymous. The prefix *ne-* may be considered as a kind of stylistic emphatic marker.

of a 'locally'-driven analogy (section 6.1.4).[8] Finally, there is one instance of modal *by* that has undergone what may be called a complete 'deetymologization' (section 6.1.5). As a result it has severed its historical ties with the complex of five *by*-elements in Modern Ukrainian. All of these developments are discussed as evidence of the continual fragmentation of unitary Old East Slavic modal *by*. As such, they also provide indirect support for the synchronic analysis of a five-member *by*-constellation.

2. Modal *by* and the Subjunctive Mood in Old East Slavic

In Modern Ukrainian the modal element *by* functions as a marker of the subjunctive mood. More specifically, one of its most common functions is to introduce the conditional-subjunctive. At the same time, it is important to keep in mind that the modal element *by* has a number of additional functions, all of them related in some way to the notion of modality (see section 4).

As far as its function as a marker of the subjunctive mood is concerned, the modal element *by* inherited this function from the period of Old East Slavic. In Common Slavic, by way of comparative textual evidence from Old Church Slavonic and Old East Slavic, we find that the subjunctive mood would have been formed from the resultative participle (otherwise also known as the *l*-participle) and an accompanying auxiliary, taken from the copula verb *byti* 'to be'.[9,10] The participle inflected for number (singular, plural and dual) and gender (masculine, feminine and neuter). The auxiliary

---

6. It is important to note that the element *by* is optional with either *(ne)mov* and *(ne)nače*. More on this appears in section 4.4.

7. As with *ščob(y)*, based on the way that it is written, it is implied that the form *(ne)nače (b(y))* represents two possible variants, *(ne)nače (b)* and *(ne)nače (by)*. The details of this are discussed in sections (5) and (6).

8. Local analogies cover only a subset of all data that would otherwise be expected to be subjected to their effects. In the case of modal *by*, the local analogy is being propelled only across a subset of the five *by*-elements. The use of the term local in this sense is based on Janda and Joseph (1986:99-100) and Joseph and Janda (1988:206), who speak of 'locally motivated changes in grammar' and 'local generalizations over (unified) subsets of the totality of the relevant data' respectively.

9. Common Slavic is the prehistoric ancestor of all the Slavic languages. It has been reconstructed by way of comparative evidence.

10. Old Church Slavonic is the earliest recorded Slavic language, ca. 10-11c. It is considered to be the ancestor of the South Slavic group of languages.

93

BEST COPY AVAILABLE

appeared inflected for all persons, either in the conditional (also called the optative) or the aorist (Schmalstieg 1983:157). Thus, there were two ways to mark the subjunctive mood. However, already in Old Church Slavonic the conditional inflection of the auxiliary had largely been replaced by the aorist inflection. Also, texts from the Old East Slavic period document the latter only (Vlasto 1988:169). Therefore, the following paradigm of the Old East Slavic subjunctive mood is given only with the aorist inflection of the auxiliary *byti*. As well, for ease of presentation, only masculine forms of the *l*-participle are shown.

(1) The Subjunctive Mood in Old East Slavic (and Old Church Slavonic) (based on Schmalstieg (1983:140))

palitı 'to burn'

	Singular	Plural	Dual
1p.	palılŭ byxŭ[11]	palılı byxomŭ	palıla byxově[12]
2p.	palılŭ by	palılı byste	palıla bysta
3p.	palılŭ by	palılı byšę	palıla byste

It is important to note at this point that the Modern Ukrainian modal element *by* derives from the 2/3sg. aorist form of the copula *byti*.

3. Modal *by* and the Subjunctive Mood in Modern Ukrainian

In Modern Ukrainian the modal element *by* has retained its function as marker of the subjunctive mood. Most commonly, it is used to introduce the conditional mood (or conditional-subjunctive) in irreal conditional structures. These are bi-clausal structures of the type 'if X were..., then X/Y would...', (e.g. 'If I were sick, (then) I would not go to school').

(2) buv *by* ja xvorym, ne pišov *by* do školy
was(m/sg) MOD I sick not went(m/sg) MOD to school
'If I were sick, I would not go to school'

Note that the element *by* must appear in each of the two clauses. Also, when the co-occurring verb is finite, it needs to carry the past tense inflection. This does not mean,

---

11. The [ŭ] represents the back jer, a reduced vowel of the mid back region.

12. The [ě] is the jat', a mid front vowel, tenser than [e].

however, that the verb conveys past meaning.[13] In fact, it is important to note that these constructions present only a relationship of contingency between the two clauses but make no reference to real time.

This is significant because it is also possible to have conditional structures that present action in real time. Consider the following English examples, given in past, present and future time respectively: 'If I was sick, (then) I did not go to school' or 'If I am sick, (then) I do not go to school' or 'If I am going to be sick, (then) I am not going to go to school'. In Ukrainian, conditional constructions presented in real time lack the presence of the modal marker *by*. Also, they use verbs in all three tenses, as required by the context of any given sentence. Finally, the subordinate (conditioning) clause is introduced by one of three possible complementizers, *jak*, *jakščo* or *koly*, all of them meaning 'if'/'when'.

(3) jak ja buv xvorym, to ja ne xodyv do školy
if I was(m/sg) sick then I not went(m/sg) to school
'If (it is the case that) I was sick, then I did not go to school'

---

13. In a variety of languages, (for instance, English or French), the past tense is overwhelmingly encountered in expressions which appear in the subjunctive. This may suggest that, perhaps universally, the past tense is used to mark the subjunctive mood (and, more specifically, the conditional-subjunctive). Consequently, one may want to extend this generalization to Ukrainian, because of the requirement that a co-occurring finite verb needs to be inflected for the past tense. As it turns out, this is not the case. In Ukrainian, non-finite and nominal (verbless) expressions may appear in the subjunctive as long as the modal element *by* is present. Consider the following two examples which illustrate the conditional-subjunctive.

(i) jak nam *by* kupyty avto, to nam *by* bulo lehše
if we(DAT) MOD to buy car then we(DAT) MOD was(n/sg) easier
'If we were to buy a car, it would be easier for us'

(ii) jak nam *by* bil'še času, to nam *by* bulo lehše
if we(DAT) MOD more time then we(DAT) MOD was(n/sg) easier
'If we were to have more time, it would be easier for us'

In fact, Ukrainian, along with Belarusian and Russian, is the only Modern Slavic language that is capable of expressing the subjunctive by way of the element *by* in a clause whose verbal form is an infinitive (Brytsyn et al. 1978:191). And, since infinitival and verbless constructions with modal *by* are found lacking in Old East Slavic, this would seem to be an East Slavic innovation.

(4) jakščo ja xvoryj, to ja ne xoju do školy
if I sick then I not go to school
'If I am sick, then I do not go to school'

(5) koly ja budu xvorym, to ja ne budu xodyty do školy
if I will (be) sick then I not will (be) to go to school
'If I am going to be sick, then I am not going to go to school'

Both the real and irreal constructions are considered to be conditionals, due to the relationship of contingency they present. However, it is only the irreal conditional constructions that occur in the conditional mood. Given this dual use of the term conditional, both as a label for mood and syntactic construction, I use this term to refer specifically to type of mood. Following Garde (1963:129) I rename the conditional 'if..., then...' construction as the hypothetical construction. Correspondingly, real conditionals (examples (3-5)) are renamed as indicative hypotheticals because they appear in the indicative mood. Irreal conditionals (example (2)) are renamed as conditional hypotheticals because they appear in the conditional mood.

4. The *by*-Elements in Modern Ukrainian

In Modern Ukrainian the element *by* carries out a variety of modal functions. As a general marker of the subjunctive mood, the modal element *by* serves to mark a number of mood types. As was seen in section (3), most commonly it is used to introduce the conditional mood. However, it can appear as a marker of modality in a number of different constructions (see below for a discussion). At the same time, in some of its functions the element *by* can appear either as a word or as an affix. This means that there are a number of functional and formal properties to contend with when dealing with the modal element *by* in Modern Ukrainian. As pointed out in section (1), this speaks of the kind of diversity that would require one to recognize not one, but several instances of the modal element *by*. As mentioned, the total number of *by*-elements is five.

What follows is an enumeration and description of the five *by*-elements in Modern Ukrainian. Illustrative examples are given as well. To make the list of *by*-elements somewhat more transparent, each of the five *by*-elements is marked as being either syntactically independent or syntactically dependent. This is for presentation purposes only. Nevertheless, these indications anticipate some of the conclusions reached in section (5) regarding the word- or affix-like nature of the five *by*-elements.

(6) The Five *by*-Elements

(a) Conditional *by*: (syntactically independent)
(i) serves to mark conditional hypothetical clauses

(b) Conditional/Emotive *by*: (syntactically dependent, forming part of the conditional complementizers ***jakby*** and ***aby*** and emotive complementizer ***ščob(y)***)
  (i) serves to mark conditional hypothetical clauses
  (ii) serves to mark emotive clauses

(c) Injunctive *by*: (syntactically independent)
  (i) serves to mark attenuated imperatives

(d) Comparative-simile/Evidential *by*: (syntactically independent, pleonastically co-occurring with the comparative-simile complementizers and evidential markers *(ne)mov* and *(ne)načе*)
  (i) co-occurs with *(ne)mov* and *(ne)načе*, which introduce clauses of similitude
  (ii) co-occurs with *(ne)mov* and *(ne)načе*, which serve as markers of evidentiality

(e) Comparative-simile/Evidential *by*: (syntactically dependent, forming part of the comparative-simile complementizer and evidential marker *niby*)
  (i) serves to mark clauses of similitude
  (ii) serves as a marker of evidentiality

4.1. Conditional (syntactically independent) *by*

The *by*-element which serves to mark the conditional mood appears in conditional hypotheticals, a construction briefly described above in section (3).

Conditional hypotheticals are bi-clausal structures with a conditioning subordinate clause and a conditioned main clause. The element *by* must be present in both clauses and a co-occurring finite verb must carry past tense inflection. The subordinate clause may appear without a complementizer, in which case the verb must occupy clause-initial position (see example (7)). This restriction on verb placement does not hold when the clause is introduced by a complementizer (see example (8)).

(7) buv *by* v n'oho čas, dokonav *by* bahato
was(m/sg) MOD in him time achieved(m/sg) MOD a lot
'If he had the time, he would achieve a lot'

(8) jak(ščo)/koly meni xtos *by* dav hrošı,
if I(DAT) someone MOD gave(m/sg) money
to ja pišov *by* do kina
then I went(m/sg) MOD to cinema
'If someone were to give me some money, I would go to the cinema'

1 0 3
BEST COPY AVAILABLE

4.2. Conditional/Emotive (syntactically dependent) *by*

Just as its syntactically independent counterpart, syntactically dependent conditional *by* serves to mark the conditional mood in conditional hypotheticals. However, unlike its syntactically independent counterpart, the syntactically dependent *by* works as a suffix. Consequently, it is attached to the complementizers which serve to introduce the subordinate clause in the conditional hypothetical construction. At the same time, this instance of modal *by* appears in complements of verbs expressing emotive attitude. Here too, the element *by* attaches to the complementizer which introduces the emotive clauses.

As far as the conditional hypotheticals are concerned, there are only two complementizers that occur with affixal *by*. These are the complementizers *jakby* and *aby*. Both of these can occur only in conditional hypotheticals. In other words, they can never occur in indicative hypotheticals. Because of their restriction to conditional hypotheticals, they are referred to as the conditional complementizers. Note that the root of *jakby* is *jak*, a complementizer in its own right. In contrast, the root of *aby*, i.e. *a-* is bound. Both *jakby* and *aby* mean 'if', but the meaning of *aby* is somewhat more restrictive, i.e. 'if only'/'as long as'. As is the rule, both clauses must contain an instance of *by* and any co-occurring finite verbs must be in the past tense.

(9)	*jakby/aby*	jomu	xtos'	pozyčyv	troxy	hrošej,		
	if(MOD)	he(DAT)	someone	lent(m/sg)	some	money		
				to	vin	*by*	to	kupyv
				then	he	MOD	that(ACC)	bought(m/sg)

'If someone were to lend him some money, he would buy it'

Apart from conditional hypotheticals, the syntactically dependent element *by* serves to express emotive attitude in complements of several verbs of emotion. All such verbs convey a strong sense of personal feeling with respect to the realization of the action expressed in the complement. The following is a list of these verbs: *bažaty* 'to desire', *xotity* 'to want', *prosyty* 'to ask/request', *vymahaty* 'to demand', *molytys'a* 'to pray', *blahaty* 'to beg', *očikuvaty* 'to expect', *zasterihaty* 'to caution' and *bojatys'a* 'to be afraid'.

Emotive clauses are introduced by the emotive complementizer *ščob(y)*. This complementizer consists of the indicative complementizer *ščo* and the element *by*.[14] As expected, a co-occurring finite verb in the clause must appear in the past tense.

---

14. The indicative complementizer *ščo* introduces complements of verbs which express either a high degree of certainty, or just a minimal amount of emotion with respect to the action in the complement clause, e.g. *znaty* 'to know' or *nadijatys'a* 'to hope'. The complement clause occurs in the indicative mood.

(10) vin xoče, *ščob(y)* ja ce zrobyv
he wants that(MOD) I this(ACC) did(m/sg)
'He wants me to do this'

4.3. Injunctive (syntactically independent) *by*

As pointed out in example (6c), injunctive *by* serves to mark an attenuated imperative. The term injunctive is a designation for an imperative-type mood, and is consistent with Brecht (1977:34), who in turn adopts the term from Jakobson (1971:139). Both Jakobson and Brecht employ the term injunctive to describe Russian constructions, much the same in form and function as the ones in Ukrainian (see examples (11-12) below), in which 'the modal meaning expressed by the particle *by* is that of will-imposition' (Brecht 1977:34).

(11) napysav *by* ty jij pod'aku
wrote(m/sg) MOD you(sg) she(DAT) thank-you
'You should write her a thank-you note'

(12) pokosyv *by* vin nam travu
mowed(m/sg) MOD he we(DAT) grass
'He should mow our lawn'

Just as in conditional hypotheticals and emotive clauses, an injunctive construction also requires that a finite verb be inflected for the past tense.

It is important to note that the injunctive is not the only available means for expressing an imperative construction. In fact, Ukrainian has a separate imperative mood which is formally marked by a set of imperative endings in the 2sg., 1pl. and 2pl. The difference between the two types of imperatives lies in the way the message is conveyed. The imperative mood expresses commands in a manner that is more direct. In contrast, the injunctive mood expresses commands in a way that is more subtle. For this reason, a *by*-type command is considered to fulfill the function of an attenuated imperative.

4.4. Comparative-simile/Evidential (syntactically independent) *by*

This instance of *by* is optional. For this reason, its presence in examples (13-14) is marked with parentheses. When it does occur, it appears side by side with the two words *(ne)mov* and *(ne)nače*. These two words have the following two functions.

First, they are found in clauses of similitude, in which they introduce the second of two clauses being compared. As such, they may be called comparative-simile complementizers. They convey the meaning 'as if'/'as though' and express some kind of hypothetical parallelism between two actions or entities. Consider the following simile-like expression.

1 (r.)

(13) vin tak bih *(ne)mov (by)/(ne)načе (b(y))*
he so ran(m/sg) as though
xto za nym hnavs'a
someone after him pursued(m/sg)
'He was running so fast, as though someone were pursuing him'

Second, these two words function as evidential markers, modifying the probability of an event's occurrence. When they are present, it is understood that the event being modified by the evidential marker is both true and real, even though there are those who would deny it, either by personal choice or through a lack of information. Their approximate meaning is 'apparently'/'so it seems'.

(14) vona *(ne)mov (by)/(ne)načе (b(y))* xodyla iz mojim bratom
she so it seems went(f/sg) with my brother
'Apparently, she used to go out with my brother'

As mentioned, optionally, the element *by* may be added immediately after *(ne)mov* and *(ne)načе* in either of their two functions. However, the meaning of the expressions remains unchanged. The modality that is conveyed by *(ne)mov* and *(ne)načе* is not amplified by the addition of *by* in any quantifiable way. At best, this instance of the element *by* may serve to provide some emphasis. But essentially, its presence is redundant and its function is merely pleonastic.[15] It is a formative whose presence truly is optional, in terms of function as well as meaning.

A final point to take note of is the fact that both the clauses of similitude and the evidential expressions do not show any restriction as to the tense of the finite verb (if one is present). Thus, all three verb tenses are possible with the optional element *by*.

4.5. Comparative-simile/Evidential (syntactically dependent) *by*

In addition to the words *(ne)mov* and *(ne)načе*, both of which may function either as comparative-simile complementizers or evidential markers, there is a third form, *niby*, which exhibits the same two meanings and functions. However, in contrast to *(ne)mov* and *(ne)načе*, both of which have the free-standing and meaningful roots *mov* and *načе*, the root of *niby* is bound, *ni-*, and carries no clear meaning in and of itself. Clearly, the modality it expresses is conveyed by the element *by*. In this particular case, the element *by* functions as a suffix, which attaches to the bound root *ni-*. Of course, unlike the *by*-element discussed in section 4.4, the *by* that co-occurs with *niby* is not optional.

---

15. Note that a pleonastic usage of *by* is frequently found with the two conditional complementizers *jakby b* and *aby b*.

BEST COPY AVAILABLE

With respect to examples that show the function of the element *by* as part of the comparative-simile complementizer and evidential marker *niby*, it is sufficient to refer back to the sample sentences given in (13-14) and to replace in either case *(ne)mov (by)* and *(ne)nače (b(y))* with *niby*.

5. The *by*-Constellation

The survey of *by*-elements in section 4 makes it clear that there is a variety of functions and formal properties that characterizes their entire set. For one, the *by*-elements convey several types of mood. For another, they can appear either as words or as affixes, and some of them have the ability to place restrictions on the tense of a co-occurring finite verb. Due to the functional and formal non-allomorphic differentiation that the by-elements exhibit it becomes clear that the five instances of the modal element *by* cannot all be analyzed as occurrences of the same morpheme. But, a five-morpheme analysis, in which each of the *by*-elements is treated as a completely separate and isolated morpheme from the rest, would treat recurrent properties of form and function across the set of *by*-elements as accidental.

This kind of seeming contradiction, whereby the five *by*-elements exhibit unity and diversity at the same time, presents a situation which calls for the theoretical construct of the morphological constellation. As defined by Janda and Joseph (1990), the morphological constellation is 'a group of elements which share at least one characteristic property of form but are distinguished by individual idiosyncrasies--either of form or of function--that prevent their being collapsed with one another'.

With respect to the five *by*-elements, there is one property that is shared by all five instances of modal *by* (see section 5.1), and five properties that distinguish amongst them (see sections 5.2 and 5.2.1-5.2.5).

5.1. The Five *by*-Elements: a Common Phonological Core

Up till now, the modal marker *by* has been introduced as a bi-segmental element, one which consists of a consonant plus vowel sequence. This is regarded as its full form. However, it was also pointed out in fn.4 and fn.7 that the modal element *by* may occur in a reduced form *b*, as in the emotive complementizer *ščob* or comparative-simile complementizer/evidential marker *(ne)nače (b)*. Thus, there are two phonological variants of the modal marker *by*: *by* and *b* (see section 5.2.2 for more details). Nevertheless, the segment [b] is present in both the full and reduced variants. As such, it may be considered as the phonological core that is common to all five *by*-elements. In fact, this common phonological core is the one property that allows us to unite the five *by*-elements as members of a single morphological constellation.

5.2. The Properties that Unite and Distinguish the Five *by*-Elements

Altogether there are five properties that differentiate amongst the five *by*-elements. These are listed below, in question form. Immediately following the list is a chart (figure 1) which provides responses to the questions-properties, thereby offering a summary of the formal properties of each individual *by*-element. Some additional discussion of these properties follows in sections 5.2.1-5.2.5.

(15) The Five Distinguishing Properties

(a) is the element *by* a word, an affix, or neither, (i.e. an intermediary form, loosely labelled as a clitic)?[16]

(b) does the element *by* show phonologically conditioned allomorphs, (i.e. *b* after a vowel-final word (or root))?

(c) can the element *by* co-occur with the copula verb *buty*?

(d) does the element *by* require a co-occurring finite verb to be [+PAST] tense?

(e) does the element *by* convey modal meaning?

	Word	Affix	Clitic	Allomorphy	Copula Co-occurrence	[+PAST] Agreement	Modal Meaning
Conditional *by*	yes			yes	yes	yes	yes
Conditional Enclitic *-zhby, -zhe, -bi(s)*		yes		no(yes)	yes	yes	yes
Injunctive *by*	yes			yes	no	yes	yes
Comparative-simile/Evidential *(ne)mos (by), (ne)maše (bi(s))*			yes	no(yes)	yes	no	no
Comparative-simile/Evidential *-sby*		yes		no	yes	no	yes

Figure 1

5.2.1. *by*: Word, Affix or Clitic?

The results concerning the word or affix status of the five *by*-elements in figure 1 are based on a number of diagnostic tests, proposed by Zwicky (1984). Specifically, only five of these tests have been found to provide insights as to the wordhood or affixhood of the various instances of modal *by*. These are as follows: deletion under identity, distribution, ordering, word-internal voicing sandhi and word-level stress.[17]

As is seen in figure 1, there are two *by*-elements that behave as words. This includes the *by*-element that functions as the conditional (non-emotive) marker, as well as the instance of modal *by* that serves to mark the injunctive. With respect to the first test, it is possible for both of these elements to be absent in one of two parallel conjuncts, without depriving the conjunct that they are absent from of the modal meaning that they otherwise bring to it. Consider the conditional hypothetical in example (16). The main (conditioned) clause contains two conjoined predicates. Note that the element *by* does not need to be present in the second of the two parallel conjuncts. In other words, it is possible for the modality that is introduced in the first of the two conjuncts to be carried over into the second.

(16) jakby bulo sonce, vin *by* vstav
if(MOD) was(n/sg) sun he MOD got up(m/sg)
i pišov *(by)* u lis po hryby
and went(m/sg)----------into forest after mushrooms
'If the sun were out, he would get up and go to the forest to gather some mushrooms'

---

16. It is important to note that the term clitic does not refer to a theoretical construct. In fact, all it is is 'an umbrella term, not a genuine category in grammatical theory' (Zwicky 1994:xiii). It is in this broad sense that I use the term clitic in order to refer to those *by*-elements which exhibit mixed word- and affix-like properties. However, it is more accurate to speak of clitic-like elements as either regular words or affixes, albeit 'with special (sometimes idiosyncratic) properties in addition to the properties they share with other members of their category' (Zwicky 1994:xvi).

17. It is important to point out that the term deletion under identity is used only for expository convenience, following Zwicky's (1984) enumeration of diagnostic criteria. By no means is it implied that a deletion process is actually taking place, and that elements present at one point in a representation are later removed by deletion. In fact, it is more appropriate to think of deletion phenomena as the absence of elements which might otherwise be expected to be present.

The unit of the word is the smallest syntactic constituent which is capable of being absent (or deleted, as in Transformational Grammar) without affecting the grammatical and semantic coherence of the conjunct from which it is absent. Given that these two *by*-elements can be absent in the second of two conjuncts, this means that they are acting syntactically as words. To continue, just like words, both of these elements have an unrestricted distribution because they are not limited to co-occurring with one specific lexical class. Also, they are freely ordered with respect to other words in a sentence. At the same time, neither of these two *by*-elements exhibits any word-internal voicing sandhi. Voicing sandhi in Ukrainian commonly takes place between a root and some affix, and is anticipatory in nature because it is triggered by a following voiced stop. In example (17) the voiced stop [b] in the noun-forming suffix *-ba* causes the root-final [č] to become voiced. Thus, the root-final [č] is retained in the verb, but in the noun it shows up as a [j].

(17) /voloč-ba/ -----> [volojba] 'prowling/roaming'
vs [voločyty] 'to drag'

However, in the case of the two instances of modal *by* under discussion, the initial [b] does not cause a preceding voiceless consonant to undergo voicing. In example (18) the root-final [č] of the word *mjač* fails to undergo voicing, even though it is immediately followed by the [b] of *by*.

(18) mjač by znyk, jakby...
ball MOD disappeared(m/sg) if...
'The ball would disappear, if...'

This again points to word-like behavior. Finally, even though these two *by*-elements do not carry word-level stress, this does not mean that they lose their status as words. Just as many function words they are prosodically weak, and simply require a stressed host to lean on. In fact, they can be more accurately referred to as obligatory (prosodic) leaners.

The instance of *by* that functions as a conditional/emotive marker and the *by* that serves as a (non-optional) comparative-simile/evidential marker both behave as affixes. To review the tests, if either one of these *by*-elements is absent in one of two parallel conjuncts, there is a loss of meaning and semantic coherence in the entire conjoined structure. This implies that they form a proper subpart of another word, i.e. the complementizer with which they co-occur. Consequently, their absence from their conjunct violates the lexical integrity of these complementizers. In fact, 'the general pattern is for no syntactic process to be allowed to refer exclusively to part of words' (Spencer 1991:42). Again, just like affixes, these *by*-elements show a restricted distribution, since they co-occur with a select class of complementizer-like words, *jak*, *a-*, *ščo* and *ni-*. Also, they do not show any freedom of movement. With respect to the voicing sandhi, there where the suitable conditions are present, voicing does take place. Thus, in the complementizer *jakby*, the [k] assimilates in voicing to the [b] of *by*, giving

rise to a [g] in *jagby*.[18] A final note about their affixal status is their ability to carry stress which is assigned at the word level. Since stress assignment is, to a large extent, arbitrary in Ukrainian, it is not surprising that affixal *by* ends up being stressed in some, but not all of the complementizers it attaches to. Thus, it is stressed in *jakby*, but not in *aby*, *ščob(y)* or *niby*. In contrast, recall that the two *by*-elements with word status never carry lexical stress.

As is seen in figure 1, optional *by*, the one that occurs in comparative-simile and evidential expressions, has been loosely labelled as a clitic. Because of its optionality, its absence in one of two parallel conjuncts does not provide any insights as to its word or affix status. Also, it never occurs in a phonological context where voicing sandhi could be triggered. Its lack of stress may suggest that it is word-like, but its distribution is quite restricted, since it co-occurs only with the comparative-simile complementizers and evidential markers *(ne)mov* and *(ne)nače*. Similarly, like affixes, it seems to lack free ordering with respect to other elements in a sentence. But, unlike affixal *by*, this instance of *by* does show some freedom of ordering with respect to the emphatic marker *ž(e)*.[19] Both of the following orders are acceptable: *(ne)nače b že* and *(ne)nače ž by*. In sum, this particular *by*-element is neither clearly a word nor an affix.[20] For the purpose of this paper, I will continue to use the term clitic when referring to optional *by*.

5.2.2. *by*: Allomorphs by/b?

As was pointed out in section 5.1, the modal marker *by* has two variants, the full form *by* and the reduced form *b*. The full form *by* is expected after consonant-final words (or roots) while the reduced form *b* is expected after vowel-final words (or roots). However, this allomorphy is not always followed. Sometimes, instead of the reduced form *b*, the full form *by* is found after vowel-final endings. Thus, the five *by*-elements show different behavior as to whether they exhibit this allomorphy. The two *by*-elements behaving as words follow this allomorphy quite regularly. In other words, after a vowel-

---

18. Although the complementizer *jakby* has no related derivatives through which the presence of an underlying [k] can be confirmed, it is important to note that this complementizer may be pronounced with a voiceless [k], especially in slower speech.

19. The emphatic marker *ž(e)* has two phonologically conditioned variants: *že*, which occurs after consonant-final words, and *ž*, which occurs after vowel-final words.

20. Optional *by* could be treated as an irregular affix, one which shows more freedom of movement than regular affixes. However, its mobility seems to be due to stylistic reasons. This is suggestive of behavior that is more characteristic of words. As Nevis and Joseph (1992) argue based on the behavior of the reflexive affix in Lithuanian, an element may be considered an affix when it shows mobility due to grammatical reasons.

final ending the reduced allomorph *b* is usually found. In contrast, the two *by*-elements behaving as affixes, as well as clitic *by* fail to follow this allomorphy. After a vowel-final ending the full allomorph *by* is found, as in *aby* and *niby*, and also *ščoby* and *(ne)nače (by)*. However, with both *ščoby* and *(ne)nače (by)* the full form *by* is not firmly established (see section 6.1.4). Thus, it is necessary to recognize the fact that both affixal conditional/emotive *by* and clitic *by* may exhibit both allomorphs.

5.2.3. *by*: Restriction of the Copula?

Of all five *by*-elements, injunctive *by* is the only one which may not co-occur with a copula. Thus, while it is possible to express commands using the imperative mood in which the copula is present, a similar request cannot be expressed with the injunctive and the modal marker *by*. Consider the following imperative expression, and the corresponding ungrammatical injunctive command.

(19) bud' dobrym
be(2/sg) good(m)
'Be good!'

(20) *buv *by* ty dobrym
were(m/sg) MOD you(sg) good(m)
'You should be good'

Consequently, this co-occurrence restriction appears to be an idiosyncrasy of the formal behavior of injunctive *by*.

5.2.4. *by*: Finite Verb is [+PAST]?

In section 3 it was pointed out that there is an intimate grammatical relationship between the [+MOD] element *by* and the finite verb that co-occurs in its clause, namely, the element *by* requires that the tense on the finite verb be [+PAST]. This may be referred to as the [+MOD]-by-[+PAST] agreement. As was mentioned in the presentation of the five *by*-elements in sections 4.1-4.5, not all of the *by*-elements require this agreement. In fact, only the two *by*-elements that serve as conditional and conditional/emotive markers, as well as injunctive *by*, require a past tense inflection on a co-occurring finite verb.

5.2.5. *by*: Modal Meaning?

In most cases, the *by*-elements introduce some kind of modal, specifically, hypothetical aspect to the expression in which they occur. Thus, both of the *by*- elements that serve as conditional and emotive markers introduce strong hypothetical meaning. In the conditional hypothetical construction, the outcome of some action is dependent on some condition, but there is no certainty as to whether this condition may be realized. In

emotive clauses the actions usually represent someone's wish. Thus, there is a strong sense in which such an action is non-existent, hence, hypothetical. The injunctive commands are hypothetical because they too refer to actions that are yet to be realized. And, in the clauses of similitude and evidential expressions in which the word *niby* is found, the element *by* introduces metaphor and probability respectively, notions that are clearly hypothetical. Of all the by-elements, it is only clitic *by*, (whose presence is always optional in a clause), that fails to introduce any modality whatsoever. Even though its occurrence is associated with a hypothetical context, it itself does not have a strong index of modal, hypothetical aspect.

6. The Role of Diachrony in Morphological Constellations

As Janda and Joseph (1990) write in reference to the morphological constellation, 'the real category to be recognized by a grammar...is the overall complex of interrelated, formally similar elements'. It is worth pointing out, however, that this kind of fragmented synchronic state of affairs is usually a result of diachronic change, progressing in one of two possible directions.

First, an originally more unitary situation may become diversified, giving rise to what is known as diachronic fragmentation. The various processes of Sanskrit reduplication are an example of such fragmentation. In fact, philological evidence, coupled with comparative reconstruction, points to a much more unitary reduplication phenomenon within Proto-Indo-European (Janda and Joseph 1986:94). Second, a synchronic state of fragmentation may arise by way of the diachronic convergence of phenomena that once were quite diverse. For example, the three morphological rules that suffix the plural, possessive and 3sg. present indicative marker *-s* in English seem to constitute some kind of unitary collective entity, due to similar allomorphy facts. But, historically all three morphemes derive from different sources, and the formal similarities shared by these three elements have increased over the centuries, (though note that these three elements have not become entirely identical in form). Thus, their current homophony is a historical innovation (Janda and Joseph 1990).

There is, therefore, an important diachronic aspect to the morphological constellation. Essentially, recognizing the need for the morphological constellation means recognizing the fact that any synchronic state of a language is one of an endless number of such states on a continuum of time. As such, sometimes a given synchronic state may present relationships between a set of linguistic elements that are best described in terms of a strict binary opposition. However, the opposite holds true as well. In fact, because of its very nature, the morphological constellation can easily expand or contract to account for just the existing number of interrelationships that hold between a set of elements at any given point in time.

6.1. The *by*-Constellation: a Case of Diachronic Fragmentation

The network of generalizations that characterizes the five-member *by*-constellation is the product of several centuries of diachronic fragmentation. In the process of its development, the Modern Ukrainian modal element *by* was affected by two degrees of morphologization, from word to clitichood, and from word to affixhood, possibly via a stage of cliticization. A loss of grammatical status, and concomitant semantic bleaching were two further changes that affected modal *by*. Certainly, the above changes did not all affect modal *by* in each and every one of its many functions. In fact, if this is what had happened, no diversification would be expected to have occurred. Instead, only in some of its functions did modal *by* undergo one, or two of the above-mentioned changes. Eventually, what had started out as a situation with a number of formally identical instances of *by* carrying out different functions, turned into a situation in which the elements were differentiated formally as well as functionally. At this point, the different instances of *by* could no longer be treated as one and the same morpheme, yet they were not distinct enough from one another to be treated as a group of isolated *by*-morphemes. This, of course, marks the appearance of the *by*-constellation.

Various aspects of the diachronic fragmentation of modal *by* are taken up in sections 6.1.2-6.1.5. To fill out the framework of time within which the fragmentation was taking place, a text-based chronology of the development of modal *by* is given in section 6.1.1 below.

6.1.1. Chronology of the Major Stages in the History of the Old East Slavic Subjunctive Mood and Modal *by*

In Old East Slavic (ca. 11-13c.) the subjunctive mood was marked by an analytic construction consisting of the *l*-participle and inflected forms of the copula *byti* in the aorist tense (see example (1)) (Nimchuk et al. 1978:300). In fact, the copula auxiliary could also appear in the conditional inflection, but this had all but disappeared in Old Church Slavonic and is not even attested in Old East Slavic. In Ukrainian, by the 14/15c., the form *by*, the 2/3sg. aorist of the copula auxiliary, had spread to the respective plural forms, replacing both the 2pl. (*byste*) and the 3pl. (*byšę*). Only the 1sg. (*byxŭ*) and the 1pl. (*byxomŭ*) forms still remained marked for both person and number, although frequency-wise their numbers were also beginning to dwindle (Nimchuk et al. 1978:303). During the 16-18c. the auxiliary appeared predominantly in a single uninflected shape, since the form *by* was used with all persons and in all numbers (Nimchuk et al. 1978:304). Finally, before the end of the 18c. the auxiliary begins to appear not only in its original form *by*, but also in a reduced form *bŭ* (Nimchuk et al. 1978:305).[21] As for

---

21. The form *bŭ* was certainly mono-segmental at this point. Not only was the reduced vowel, i.e. the jer, not etymological in this form, but it was no longer pronounced at this

the present time, the subjunctive mood is marked by the modal element *by*, which has two allomorphs, *by* and *b*. What was once the copula auxiliary in the aorist inflection is now a single uninflected form. The original *l*-participle is now the past tense, and the original analytic unit (*l*-participle plus aorist copula auxiliary), which was once the sole marker of the subjunctive mood has undergone disintegration. Now, the modal element *by* can occur in both infinitival and nominal (verbless) clauses, and when it occurs in a finite clause it requires the co-occurring verb to have a past tense inflection.

6.1.2. The Morpholexicalization of the Emotive Attitude and the Morphologization of Modal *by*: the Emotive Complementizer *ščob(y)*

In Old Church Slavonic the emotive attitude was not always required in those emotive clauses which were introduced by the verb *xotěti* 'to want'. However, in Russian, as well as in Ukrainian, the emotive attitude is obligatory after this verb of desire (Garde 1961:26). Assuming that Old Church Slavonic provides evidence of a situation that was common to all the Slavic languages of nearly one thousand years ago, it is clear that a change in the use of the emotive attitude in emotive clauses has taken place. According to Garde (1961:29), when the verb *xotěti* introduced a subordinate clause in Old Church Slavonic, the emotive attitude was invoked only when it was apparent from the context that the wish expressed by the subject of the verb *xotěti* had not been realized. However, if it was clear that the realization of the wish was, or is certain to be fulfilled, then the emotive attitude was not required. In contrast, in Ukrainian the emotive attitude is obligatory after the verb *xotity*, regardless of the actual realization of the wish. In this particular instance the use of the emotive attitude has become morpholexicalized, since its presence is directly required by a particular lexical item, the verb *xotity*. Whereas the use of the emotive attitude in emotive clauses was once determined by the general pragmatic context, now it has become restricted to specific lexical items. In a sense, a fragmentation has occurred. The absolute presence of the emotive attitude in emotive clauses has now become particularized to a clearly defined set of verbs, one of which is *xotity*. Janda and Joseph (1986:95) write that morpholexicalization is commonly encountered as one of the leading causes of fragmentation, and they cite several instances of this process in reduplication phenomena, both from Sanskrit, and a variety of other languages.

Once the emotive attitude had undergone morpholexicalization with respect to the verb *xotity*, the presence of the emotive attitude with this verb was now a requirement. This would mean that this information could now be encoded in the verb itself.

---

time. In fact, it was written here due to a long-standing orthographic tradition. The jers, which had lost all phonetic value by the 13c., were still being inserted in those places where they had once been pronounced as reduced vowels. As well, they were inserted in those places where vowels other than jers had been lost.

Therefore, a verb like *xotity* could now subcategorize for a complement in the emotive attitude. Ultimately, this would have led to the development of an emotive complementizer *ščob(y)*, with the morphologization of original word-like *by*. Indeed, this is what we find in Modern Ukrainian. The verb *xotity* subcategorizes for the emotive complementizer *ščob(y)* and the *by* contained within it works as an affix.

By way of the process of morphologization some instances of the originally word-like modal element *by* turned into the affix that introduces the emotive attitude in emotive clauses. More specifically, this is an inflectional affix because it encodes grammatical information, namely the grammatical category of modality. This allows us to distinguish between an indicative complementizer *ščo* and a corresponding emotive complementizer *ščob(y)*, whose inflectional affix *-by* introduces the feature of modality [+MOD].[22]

At the same time, recognizing a pair of indicative and emotive complementizers allows for a simple explanation of the facts concerning verbs and their complement types. For example, a verb like *xotity* can only take an emotive complement (see example (21)), while a verb like *znaty* 'to know' may take both an indicative complement (see example (22)), and what seems to be an emotive one (see example (23)).

(21) ja xoču, *ščob(y)* vin pišov
I want that(MOD) he went(m/sg)
'I want him to go'

(22) ja znaju, *ščo* vin pišov
I know that he went(m/sg)
'I know that he went'

(23) ja znaju, *ščo* vin *by* pišov
I know that he MOD went(m/sg)
'I know that he would go'

It is interesting to compare examples (21) and (23). While both of the complements contain the element *by*, only the complement of *xotity* is introduced by the emotive complementizer *ščob(y)*. The allegedly emotive complement of *znaty* is introduced by the indicative complementizer *ščo*. Even though the element *by* is present, it does not follow *ščo*. In fact, it would be ungrammatical if the entire sequence *ščob(y)* were to introduce a complement of a verb like *znaty*. To continue, the phrase in example (23), which is glossed as 'that he would go', does not represent a genuine emotive clause.

---

22. Similarly, there is a set of indicative and conditional complementizers, *jak* and *jakby*. However, the development of *jakby* is not discussed in this paper.

Rather, it should be interpreted as the main clause of an embedded conditional hypothetical. Expressed in full, example (23) could read 'I know [that [he would go] [if he were here]].[23] Once it is understood that the complement clause of *znaty* is not emotive, it becomes clear why the entire sequence *ščob(y)* cannot introduce the clause. Thus, a verb like *znaty* does not subcategorize for an emotive complement, but a verb like *xotity* does.

(24) xotity[+EMOT]: xotity, [*ščob(y)*...] 'to want'

(25) znaty[+INDIC]: znaty, [*ščo*...] 'to know'
znaty, [*ščo* [...*by*...] [*jakby*...]]

Note that the proposal for an inflected complementizer may seem somewhat unusual, even if this is only because a similar analysis of the emotive complementizer in Ukrainian has never been proposed in the literature. Nevertheless, inflected complementizers are not uncommon. For example, in West Flemish, a dialect of Dutch, there are complementizers that agree in number and person with the subject and inflection of the embedded clause (Haegeman 1991:119). At the same time, function words other than complementizers can carry inflection. For instance, Hinrichs (1984) presents a case for inflected prepositions in German, and pronouns are often inflected with case markings parallel to the nominal inflection.

A final note in support of the inflected emotive complementizer can be drawn from diachrony regarding directional tendencies in the process of morphologization. Inflectional affixes tend to have function words as their source, while derivational affixes do not. Joseph and Janda's (1988:197) enumeration of several cases of morphologization from a variety of languages seems to support this observation. Also, Jeffers and Zwicky (1980:59) note that 'whether the end product is an inflectional or derivational affix seems to depend heavily on the meanings expressed, in particular on whether a change of word class is involved or not'. In the case of the emotive complementizer, when the affix *-by* is added, no change in word class is involved. Furthermore, the source of the [+MOD] affix *-by* is the copula auxiliary, which served as a function word in the Old East Slavic analytic construction expressing the subjunctive mood.

Treating the emotive affix *-by* as inflectional can be motivated on both language-internal synchronic and diachronic grounds, as well as on cross-linguistic evidence. Coupled with evidence of the morpholexical particularization of the emotive attitude, this

---

23. Note that it is sufficient for a conditional hypothetical to consist only of the main (conditioned) clause. Even though the condition is not overtly present, it is, nevertheless, understood.

morphologization of *by* provides proof of the gradual fragmentation of the unitary modal element *by*.

6.1.3. The Degrammaticalization and Semantic Bleaching of Modal *by*: the Comparative-Simile Complementizers *niby*, *(ne)mov (by)* and *(ne)nače (b(y))*

In addition to the comparative-simile complementizer *niby*, Modern Ukrainian has the comparative-simile complementizer *jakby*, which fulfills the same function. Unlike *niby*, *jakby* is less frequent and more dialectal. Also, there is another difference between the two. While the *by* in *niby* does not require a co-occurring finite verb to have a past tense inflection, the *by* in *jakby* does. As a result, the *by* in the comparative-simile complementizer *jakby* can be considered as an instance of conditional/emotive affixal *by*. Essentially, it does not show any additional formal differentiation from it.

Keeping this in mind, I will take a brief look at the textual evidence in order to form a picture of the diachronic fragmentation that took place in the case of the comparative-simile complementizers *niby* and *jakby*. The complementizer *jakby* was in frequent use right until the 18c., while its synonym *niby* first began to appear in the late 17c. (Nimchuk et al. 1978:478-479). The root of *niby* derives from the Old East Slavic particle *nĕ*, which was used to qualify the indeterminate nature of some entity or event. However, this element is very seldom attested during the 13-16c. (Nimchuk et al. 1978:471).

An interesting question to ask is the following: why was the [+MOD]-*by*-[+PAST] agreement lost with the *by* that forms part of *niby*, and why was it retained with the *by* that forms part of *jakby*? Consider the following hypothesis. The root *ni-*, (which was bound, because it no longer occurred on its own), already encoded modal meaning as a result of an earlier function as a qualifier of indeterminacy. Thus, the addition of modal *by* could have been perceived as semantically redundant. This could have led to a weakening of the [+MOD] feature of this *by*, ultimately leading to an elimination of the selection for the past tense on a co-occurring finite verb. In contrast, the comparative element *jak* did not express any modality on its own. Therefore, the addition of *by* clearly introduced modal meaning to the comparative expression, and its [+MOD] feature was grammatically significant, implying further that the selection for a past tense verb would be maintained.

Interestingly, note that in a synchronic analysis of Modern Ukrainian it is the *by* in *niby* that is perceived as actually carrying modal meaning. As was pointed out in section 4.5, this is due to the fact that no clear meaning can be assigned to the bound root *ni-*. Also, speakers are aware of the fact that the element *by* encodes modality elsewhere. As far as *niby* goes synchronically, the *by* is still understood as a meaningful modal element, even though it does not require a co-occurring finite verb to be marked for the

past tense. This further implies that it does not introduce the grammatical feature [+MOD] in its clause.[24]

In a sense, the synchronic analysis of *niby* is the opposite of the diachronic analysis that accounts for the formation of this comparative-simile complementizer. Synchronically it is the *by* that carries modal meaning. The bound root *ni-* has no clear meaning and serves only as a comparative-simile complementizer stem. Diachronically the modal meaning of *by* was weakened, and made redundant due to the modality expressed by the comparative-simile complementizer root *ni-*.

Timewise, the two comparative-simile complementizers *(ne)mov* and *(ne)nače* appeared later than *niby*. Since both of them have a clear modal meaning of their own, the *by* that may co-occur with them did not need to add any additional nuances of modality. Consequently, it too did not need to place any requirement on the tense of a co-occurring finite verb. However, because both *(ne)mov* and *(ne)nače* are free words, this *by*-element never developed the need to be obligatorily present, as did the *by* that began co-occurring with the bound root *ni-*. Thus, it has developed the greatest distance from the original modal marker *by*. Apart from undergoing degrammaticalization and losing its status as a grammatical marker, (as well as becoming a clitic), it also underwent semantic bleaching, simply becoming some kind of formative that co-occurs optionally with both *(ne)mov* and *(ne)nače*.[25]

6.1.4. Resolution of the *by/b* Allomorphy via a Locally-driven Analogy

An important piece of information from section 6.1.1 is the fact that the appearance of allomorphy of the modal element *by* was already well established by the end of the 18c. In fact, this allomorphy first began to appear in the texts in the 17c. (Nimchuk et al. 1978:492), suggesting that its manifestation in the spoken medium may have taken place a century earlier, already in the 16c. In all likelihood, the current synchronic distribution of the presence or absence of allomorphy was not a fact of 16/17c. Ukrainian. (Recall figure 1, where it is shown that word-like *by* does show

---

24. Coincidentally, since this *by* does not require [+MOD]-by-[+PAST] agreement but does carry modal meaning, this implies that the feature [+MOD] must be a purely grammatical notion defining the category of modality. Therefore, even if a *by*-element does not carry the grammatical feature [+MOD], (like the *by* in *niby*), it can still convey modal meaning. This can be extended to suggest that the affix *-by* in *niby* is derivational, because it has lost the feature [+MOD], and with it, the status of a grammatical marker.

25. Diachronically, the *by* that forms part of *niby* underwent these same developments, but its modality has been re-established synchronically, based on the desemanticization of the otherwise obsolete root *ni-*.

allomorphy, while affixal and clitic *by* basically do not.) Thus, a Middle Ukrainian text from 1698 still shows the original full allomorph *by* in what later became the Modern Ukrainian emotive complementizer *ščob(y)* (written as <*shchoby*> in the text). But, in a slightly earlier text, dating from 1691, the new reduced allomorph *b* is already found as well <*shchob*>. In fact, the form with reduced *b* appears ever more frequently in the texts as one moves forward in time. Compare this with texts from the 14-16. in which this expression is written only with the full form *by*, <*shchoby*> (Nimchuk et al. 1978:460). In fact, this is the form of *by* that is peculiar to the set of *by*-complementizers of Modern Ukrainian.

Considering that the alternant with *by*, (i.e. *ščoby*), is currently predominant in speech, and may be regarded as a largely spoken form, while *ščob* is basically restricted to writing, and is considered by dictionaries and grammars as the prescriptive form, it is necessary to relate the modern-day synchronic distribution with the facts of Middle Ukrainian texts, in which both variants co-existed, i.e. first there was *ščoby*, and then, increasingly, *ščob*. Actually, from this point on, two paths of development are possible in the resolution of this allomorphy, each of which supports the fact that there was, or still is, some fragmentation of the *by*-elements.

In one picture, some expressions develop two co-existing alternants. For example, first there is *ščoby*, then *ščob* via allomorphy. In contrast, an expression like *jakby* continues on in a single variant, given that the reduced allomorph *b* is not possible post-consonantally, i.e. **jakb*. In time, the newer variant *ščob* begins to gain ground, and spreads, destined to become the prescriptive form in Standard Modern Ukrainian. Now, however, the reverse trend seems to be at work. The variant *ščoby* seems to be increasingly preferred to *ščob*, especially in speech. Thus, due to its stability as a non-varying form, the complementizer *jakby* could very likely have become the model for a form-based analogy, motivating the reappearance of the full form *by* in what is now the emotive complementizer *ščoby*. Such an analogy supports the fact that there is some group of elements, whose members seem to form some coherent unit. In this case, this is the group of *by*-complementizers. This unit then becomes the domain for the application of an analogy, an analogy that is 'local' because it fails to go beyond this unit to affect *by*-elements that do not form part of complementizers. Of course, some fragmentation must have taken place at some prior point in time in order for this grouping of *by*-complementizers to have come into being.

In another picture, the variant with the reduced allomorph, *ščob*, never gains any ground in the spoken language, but simply persists as a written variant, ultimately becoming the prescriptive form it is today. In this case, the original variant *ščoby* never goes out of spoken use. If, as it is assumed under this hypothesis, the variant *ščob* never became accepted in speech, this again may support the idea that some fragmentation of the *by*-elements could have taken place by the 16/17c. Hence, expressions like *jakby* and *ščoby* possibly already exhibited similarities in syntactic patterning, i.e. as complementizers, and a form like *jakby*, which did not have any other alternant available,

could have exerted an influence on the form *ščoby*, reinforcing it with the full allomorph *by*, as is characteristic of all *by*-complementizers.

No matter which of these two hypotheses is more real in terms of the actual sequence of events, the observation that is most significant for this discussion is the fact that fragmentation of modal *by* had occurred. Some instances of *by* had become part of complementizers and this facilitated either the reintroduction or retention of the form *ščoby* (vs *ščob*), a form which has the full allomorph *by*, as do all other complementizers with *by*.

While there is no doubt that *ščob* is the prescriptive variant and *ščoby* is a variant of spoken speech, there is less certainty about which of these two variants is older or newer. Depending on the actual steps that took place in the development of this complementizer, *ščoby* could either be newer, if it is a recently analogically-driven formation, with no direct connection with the *ščoby* of the 16/17c., or it could be older, if it is a direct, uninterrupted continuation of the original form (with *ščob* coming in as a largely written variant).

Finally, recall that there is an instance of clitic *by* which appears in the expected reduced allomorph *b* after the vowel-final stem *(ne)nače*. Now, however, it may be encountered in its full allomorph *by*, contrary to the phonologically determined distribution. Since the appearance of the expression *(ne)nače (b)* is rather late, (no dates are given, though it did not appear until after *niby*, which is first attested in the late 17c. (Nimchuk et al. 1978:479)), it is very likely that the element *by* obeyed the then current allomorphy, suggesting that an alternant *(ne)nače (by)*, with the full allomorph *by*, probably never existed when this expression first appeared. Therefore, the appearance of the alternant *(ne)nače (by)* is yet another example of the workings of a local analogy. As a comparative-simile complementizer and evidential marker, the alternant *(ne)nače (b)*, with the predictable reduced allomorph *b*, patterns syntactically with *(ne)mov (by)* and *niby*, other similar comparative-simile complementizers and evidential markers. Since the latter two expressions both can occur only with the full allomorph *by*, it is not surprising that the full allomorph is also appearing with *(ne)nače*, thereby bringing unity of form to the entire set of comparative-simile complementizers and evidential markers. Again, the existence of this grouping of *by*-complementizers and evidential markers points to a fragmentation of a set of originally identical *by*-elements.

In summary, it may seem that there is a correlation between the presence or absence of allomorphy and the word/clitic/affix status of the *by*-elements, i.e., word-like *by* does show the allomorphy, but affixal and clitic *by* (basically) do not. This is a correlation that is obvious in retrospect. The absence of allomorphy should not be seen as deriving directly from the affixal status of morphemes. After all, affixhood is not a prerequisite for allomorphy. And, even though affixal *by* does not follow the allomorphy in the form *ščoby*, it is important to point out that there is, even today, an instance of affixal *by* in the variant *ščob* which does show the presence of allomorphy. Rather, the

absence of allomorphy derives indirectly from the affixal status of the *by*-elements, as determined by the locally-driven analogy which operates across the set of *by*-complementizers in which the *by*-elements occur in affixal form. Also, there is no reason to believe (on the basis of both morphological and syntactic evidence) that clitic *by* has already turned into an affix, and yet this particular instance of *by* is beginning to show an absence of allomorphy, exactly because of the form-based analogy, whose domain is the set of *by*-complementizers and evidential markers, of which clitic *by* is a member. Thus, the above-mentioned correlation supports the fact that fragmentation of the original *by*-unity has occurred.[26]

6.1.5. A Diachronic Chip off the Old *by*-Block

In the three preceding sections I provided an outline of the various ways in which the diachronic fragmentation of the subjunctive mood and of the modal element *by* have taken place, starting from the times of Old East Slavic, and moving right up to the present state of Modern Ukrainian. Even though it was seen that the continuous fragmentation resulted in a break-up of the original *by*-unity, yielding several formally differentiated instances of *by*, it was also seen that all of these elements still maintain a relationship amongst themselves, thereby preserving their so-called 'ancestral heritage'.

However, there is one instance of *by* in Ukrainian which has completely severed its ties with the set of five *by*-elements that form the *by*-constellation. This *by* is found in its reduced form in two words, *sebto* and *tobto*, both of which are used as parentheticals, with the meaning 'that is'/'so to say'. Diachronically these words are made up of the deictic pronouns *se* 'this', (*ce* in Modern Ukrainian), and *to* 'that', followed by the modal element *by* in its reduced allomorph *b*, and the emphatic marker *to* (Nimchuk et al. 1978:464). But, synchronically these words are not parsible, and are analyzed as monomorphemic. Native speakers have no inkling as to the fact that the segment [b] in these words derives from the modal marker *by*. In answer to my query as to the etymology of *sebto* and *tobto*, one speaker was unable to relate these words synchronically to any other set or sets of words in the language. Another speaker offered an interesting etymology of

---

26. Unfortunately, in the sampling of cited examples given by Nimchuk et al. (1978) the expressions *aby* and *niby*, which now function as the conditional complementizer and comparative-simile complementizer/evidential marker respectively, never appear with the reduced allomorph *b*. Unattested forms like *<*ab*> and *<*nib*> could have been possible with these two particular examples, just like <*shchob*> vs <*shchoby*>, as attested in the 17c. Furthermore, since the form *nib* does exist dialectally, as shown by Hrinchenko's (1958-1959) dictionary, it probably did undergo the effects of allomorphy. A more thorough check of available written evidence would be suggested before seeing how these two expressions fit into the development of the *by*-complementizers.

her own, one which derives these words from the dative forms of the personal pronouns, *sobi* (3sg.) and *tobi* (2sg.) respectively, and the emphatic marker *to*. Clearly, this unetymological segmentation would not be possible if the segment [b] were still perceived as relatable to the five *by*-elements in the *by*-constellation.

The purpose of including this 'former' *by*-element in the discussion was to give yet additional proof of the fragmentation of the modal marker *by*. However, this particular instance of *by* chipped away completely from the interrelated network of elements in the *by*-constellation. This shows that, at least in this particular instance, the fragmentation process has been taken to its ultimate end. Synchronically, the segment [b] that is found in *sebto* and *tobto* is in no way a member of the *by*-constellation. It is only diachronically that a link can still be maintained between the *by*-remnant and the modal marker *by*.

7. Conclusion

In this paper I have shown that there are five distinct manifestations of the modal element *by* in Modern Ukrainian. I drew on various syntactic, morphological, phonological and semantic evidence to point out the individuality of these five *by*-elements. At the same time, I pointed out overlap in form and function, suggesting that the five *by*-elements represent a morphological constellation. Since constellations are a result of the workings of diachrony, I showed the various processes by way of which the original unitary *by*-morpheme of Old East Slavic became fragmented over the centuries, giving rise to five similar-but-distinct *by*-elements in Modern Ukrainian.

References

Brecht, Richard D. 1977. *Čtoby* or *čto* and *by*. Folia Slavica 1.33-41.

Brytsyn, M. IA., M.A. ZHovtobriukh and A.V. Maiboroda. 1978. Porivnialna hramatyka ukrains'koi i rosiis'koi mov. 2nd edn. Kyiv: Vyshcha Shkola.

Garde, Paul. 1961. Le conditionnel en vieux slave dans les propositions finales et complétives. Revue des études slaves 39.17-30.

---------- 1963. L'emploi du conditionnel et de la particule *by* en russe. Aix-en-Provence: Publication des Annales de la Faculté des Lettres.

Haegeman, Liliane. 1991. Introduction to Government and Binding Theory. Oxford: Blackwell.

Hinrichs, Erhard W. 1984. Attachment of Articles and Prepositions in German: Simple Cliticization or Inflected Prepositions. OSU WPL 29.127-138.

Hrinchenko, Borys D. 1958-1959. Slovar' ukrains'koi movy. 4 vols. Kyiv: Akademiia Nauk Ukrains'koi RSR. (Photocopy reprint of the 1907-1909 original, published by Kievskaia Starina, Kyiv.)

Jakobson, Roman. 1971. Shifters, Verbal Categories, and the Russian Verb. Selected Writings, II, 130-147. The Hague: Mouton.

Janda, Richard D. and Brian D. Joseph. 1986. One Rule or Many? Sanskrit Reduplication as Fragmented Affixation. OSU WPL 34.84-107.

---------- In preparation. On Constellations in Morphology: Crosslinguistic Evidence and Modern Greek *mi(n)(-)*. (1990 unpublished manuscript.)

Jeffers, Robert J. and Arnold M. Zwicky. 1980. The Evolution of Clitics. *OSU WPL* 24.55-64.

Joseph, Brian D. and Richard D. Janda. 1988. The How and Why of Diachronic Morphologization and Demorphologization. Theoretical Morphology: Approaches in Modern Linguistics, ed. by Michael Hammond and Michael Noonan, 193-210. San Diego: Academic Press.

Nevis, Joel A. and Brian D. Joseph. 1992. Wackernagel Affixes: Evidence from Balto-Slavic. Yearbook of Morphology 1992, ed. by Geert Booij and Jaap van Marle, 93-111. Dordrecht: Kluwer Academic Publishers.

Nimchuk, V.V. et al. (eds.). 1978. Istoriia ukrains'koi movy: morfolohiia. Kyiv: Naukova Dumka.

Noonan, Michael. 1985. Complementation. Language Typology and Syntactic Description, vol. II: Complex Constructions, ed. by Timothy Shopen, 42-140. Cambridge: Cambridge University Press.

Schmalstieg, William R. 1983. An Introduction to Old Church Slavic. 2nd edn. Columbus, OH: Slavica Publishers. (original: 1976)

Spencer, Andrew. 1991. Morphological Theory: an Introduction to Word Structure in Generative Grammar. Oxford: Blackwell.

Sydorenko, Halyna. In preparation. The Atypical Morpheme: Two Case Studies from Ukrainian. OSU Ph.D. dissertation.

---------- 1993. Modal *by* in Ukrainian: Evidence for a Morphological Constellation. OSU Pre-Generals Paper. (Unpublished manuscript.)

Vlasto, A.P. 1988. A Linguistic History of Russia to the End of the Eighteenth Century. Oxford: Clarendon Press.

Zwicky, Arnold M. 1984. Clitics and Particles. OSU WPL 29.148-173.

---------- 1994. What is a Clitic? Clitics: a Comprehensive Bibliography 1892-1991, by Joel A. Nevis, Brian D. Joseph, Dieter Wanner and Arnold M. Zwicky, xii-xx. Amsterdam: John Benjamins Publishing Company.